

**SEARCH REQUEST FORM**

Scientific and Technical Information Center

Requester's Full Name: Callie Shosho Examiner # ~~2000~~ Date: 2/19/04  
Art Unit: 1714 Phone Number ~~202-272-1123~~ Serial Number: 091714, 1656  
Mail Box and Bldg/Room Location: Remsen Results Format Preferred (circle): PAPER DISK E-MAIL  
10B11 (mailbox)

**If more than one search is submitted, please prioritize searches in order of need.**

\*\*\*\*\*

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Water-Borne Aqueous Epoxy-Ester/Acrylate and Poly(Urethane/Urea)  
Based Crosslinked Resins  
Inventors (please provide full names): Ralph Arcurio, Richard Szarnski,  
Sam Lucci, Jeannette Simon, Truncellito  
Earliest Priority Filing Date: 11/16/00

*\*For Sequence Searches Only\* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*

Please find subject matter of claim 1

→ water dispersible poly(urethane/urea)

See claims 21-22 for specific structure

See claims 5-13 for method of making

See claim 15 for specifically named polymer

See claims 16-20 for specific polyurethane prepolymer

→ water-dispersible poly(epoxy/ester/acrylate)

See claims 34-38 for specific structure

See claims 24-29 for method of making

See claim 33 for specifically named polymer

\*\*\*\*\*

**STAFF USE ONLY**Searcher: H. Fuller

Searcher Phone #: \_\_\_\_\_

Searcher Location: \_\_\_\_\_

Date Searcher Picked Up: \_\_\_\_\_

Date Completed: 2/23/04Searcher Prep & Review Time: 30

Clerical Prep Time: \_\_\_\_\_

Online Time: 85**Type of Search**

NA Sequence (#) \_\_\_\_\_

AA Sequence (#) \_\_\_\_\_

Structure (#) 10

Bibliographic \_\_\_\_\_

Litigation \_\_\_\_\_

Fulltext \_\_\_\_\_

Patent Family \_\_\_\_\_

Other \_\_\_\_\_

**Vendors and cost where applicable**STN ✓

Dialog \_\_\_\_\_

Questel/Orbit \_\_\_\_\_

Dr.Link \_\_\_\_\_

Lexis/Nexis \_\_\_\_\_

Sequence Systems \_\_\_\_\_

WWW/Internet \_\_\_\_\_

Other (specify) \_\_\_\_\_



# STIC Search Report

EIC 1700

STIC Database Tracking Number: 114721

TO: Callie Shosho  
Location: REM 10D11  
Art Unit : 1714  
February 24, 2004

Case Serial Number: 09/714656

From: Kathleen Fuller  
Location: EIC 1700  
REMSEN 4B28  
Phone: 571/272-2505  
Kathleen.Fuller@uspto.gov

## Search Notes

I did structure searches for components A and B. There were only 8 CA references to both parts of the composition and no answers when water was required. Then I did a search using polymer class terms for polyurethanes and the other polymers. I also text searched this. There is a reference to the applicants which has the polymer of claim 15. As you know CA indexes polymers by the starting monomers so that is how I searched. There would be no indexing with the structural repeating units of claims 16, 21, 22, 34.



# STIC Search Results Feedback Form

**EIC17000**

Questions about the scope or the results of the search? Contact *the EIC searcher* or contact:

Kathleen Fuller, EIC 1700 Team Leader  
571/272-2505 REMSEN 4B28

## Voluntary Results Feedback Form

- I am an examiner in Workgroup:  Example: 1713
- Relevant prior art **found**, search results used as follows:

- ☐ 102 rejection
- ☐ 103 rejection
- ☐ Cited as being of interest.
- ☐ Helped examiner better understand the invention.
- ☐ Helped examiner better understand the state of the art in their technology.

Types of relevant prior art found:

- ☐ Foreign Patent(s)
- ☐ Non-Patent Literature  
(journal articles, conference proceedings, new product announcements etc.)

➤ Relevant prior art **not found**:

- ☐ Results verified the lack of relevant prior art (helped determine patentability).
- ☐ Results were not useful in determining patentability or understanding the invention.

Comments:

Drop off or send completed forms to EIC1700 REMSEN 4B28



=> FILE REG

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STRUCTURE FILE UPDATES: 22 FEB 2004 HIGHEST RN 652965-05-4  
DICTIONARY FILE UPDATES: 22 FEB 2004 HIGHEST RN 652965-05-4

TSCA INFORMATION NOW CURRENT THROUGH JULY 14, 2003

Please note that search-term pricing does apply when  
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Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more  
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FILE COVERS 1907 - 23 Feb 2004 VOL 140 ISS 9  
FILE LAST UPDATED: 22 Feb 2004 (20040222/ED)

This file contains CAS Registry Numbers for easy and accurate  
substance identification.

=> D QUE L32

L4	25199	SEA	FILE=REGISTRY	ABB=ON	80-05-7/CRN	-	phenol A
L6	177218	SEA	FILE=REGISTRY	ABB=ON	1.30.1/RID	-	
L7	16369	SEA	FILE=REGISTRY	ABB=ON	L4 AND L6		
L10	1440	SEA	FILE=REGISTRY	ABB=ON	60-33-3/CRN		
L12	363	SEA	FILE=REGISTRY	ABB=ON	463-40-1/CRN		
L14	2638	SEA	FILE=REGISTRY	ABB=ON	112-80-1/CRN		
L15	120	SEA	FILE=REGISTRY	ABB=ON	L7 AND (L10 OR L12 OR L14)		
L16		STR					

120 polymers with the components of B



A

Cb~Ak  
@8 @9

O=C=N~G1~N=C=O  
1 2 3 4 5 6 7

1st monomer

Ak~Cb~Ak  
@10 11 @12

VAR G1=AK/CB/10-3 12-5/8-3 9-5

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 12

STEREO ATTRIBUTES: NONE

L17 STR

2nd monomer

Ak~OH  
1 2

OH 3

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 3

STEREO ATTRIBUTES: NONE

L19 SCR 2043

L21 STR

3rd

N—C  
1 2

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 2

STEREO ATTRIBUTES: NONE

L23 STR

or 4th monomer

NH3 1

NODE ATTRIBUTES:  
 DEFAULT MLEVEL IS ATOM  
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
 RING(S) ARE ISOLATED OR EMBEDDED  
 NUMBER OF NODES IS 1

STEREO ATTRIBUTES: NONE

L25 36927 SEA FILE=REGISTRY SSS FUL L16 AND L17 AND (L21 OR L23) AND L19  
 L26 2 SEA FILE=REGISTRY ABB=ON L15 AND L25  
 L27 1 SEA FILE=HCAPLUS ABB=ON L26  
 L28 45857 SEA FILE=HCAPLUS ABB=ON L25  
 L29 168 SEA FILE=HCAPLUS ABB=ON L15  
 L30 8 SEA FILE=HCAPLUS ABB=ON L28 AND L29  
 L31 8 SEA FILE=HCAPLUS ABB=ON L27 OR L30  
 L32 0 SEA FILE=HCAPLUS ABB=ON L31 AND (H2O OR WATER? OR AQ OR  
 AQUEOUS?)

*36,927 polymers - A*

*no answers with water*

*8 CA references with A and B*

=> D L31 1-8 ALL HITSTR

L31 ANSWER 1 OF 8 HCAPLUS COPYRIGHT 2004 ACS on STN  
 AN 2000:738849 HCAPLUS  
 DN 133:310922  
 ED Entered STN: 19 Oct 2000  
 TI Abrasive article comprising organometallic coupling agent  
 IN Bruxvoort, Wesley J.; Keipert, Steven J.; McCormick, Fred B.; Williams,  
 Jerry W.; Wright, Bradford B.  
 PA 3M Innovative Properties Co., USA  
 SO U.S., 14 pp., Division of U. S. Ser. No. 890,593.  
 CODEN: USXXAM  
 DT Patent  
 LA English  
 IC ICM B24D003-02  
 ICS B32B005-16  
 NCL 428323000  
 CC 42-5 (Coatings, Inks, and Related Products)  
 Section cross-reference(s): 57, 74

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6132860	A	20001017	US 1997-886737	19970701
PRAI	US 1992-890593	A3	19920521		

AB An energy sensitive composition comprises a monomeric organometallic complex essentially free of nucleophilic groups and which, upon exposure to energy, bonds to basic reactive sites on a substrate (e.g. an abrasive oxide) via the metal center, leaving the polymerizable group of the complex unreacted and unrestricted and a binder adhesive. The adherent compns. are useful in applications such as adhesion of polymers to substrates, protective coatings, printing plates, durable release coatings, primers, binders, and paints.  
 ST organometallic polymer printing plate adhesion improvement; abrasive coupling agent organometallic polymer  
 IT Abrasives

- (coatings containing organometallic polymer coupling agent with good adhesion to)
- IT Coating materials  
Coupling agents  
(coatings containing organometallic polymer coupling agent with good adhesion to various substrates)
- IT Polysiloxanes, preparation  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(di-Me, Me hydrogen, reaction products with methyl(vinyl)cyclopentadienyl-tricarbonylmanganese; coatings containing organometallic polymer coupling agent with good adhesion to various substrates)
- IT 157442-06-3P  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(adhesion promoter; coatings containing organometallic polymer coupling agent with good adhesion to aluminum)
- IT **68003-11-2**  
RL: TEM (Technical or engineered material use); USES (Uses)  
(binder adhesive; coatings containing organometallic polymer coupling agent with good adhesion to abrasive)
- IT 146222-54-0DP, reaction products with tricarbonyl magnesium chloride compound 157442-07-4DP, reaction products with perfluoroethylene oxide diol  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(coatings containing organometallic polymer coupling agent)
- IT 13007-92-6DP, Chromium hexacarbonyl, reaction products with polystyrene and methylsilanediol-methylphenylsilanediol copolymer 156894-03-0DP, Methylsilanediol-methylphenylsilanediol copolymer, reaction products with chromium hexacarbonyl and polystyrene  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(coatings containing organometallic polymer coupling agent with good adhesion to aluminum)
- IT 106-89-8, reactions 78453-77-7  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(coatings containing organometallic polymer coupling agent with good adhesion to aluminum)
- IT 9003-53-6D, Polystyrene, carbonylchromium complexes 76810-83-8  
157046-61-2 157046-62-3 157046-63-4 157073-66-0 157073-67-1  
157073-68-2 302591-27-1D, Dimethoxydimethylsilane-tetramethyldisiloxane copolymer, methyl(vinyl)cyclopentadienyl-tricarbonylmanganese endcapped  
RL: TEM (Technical or engineered material use); USES (Uses)  
(coatings containing organometallic polymer coupling agent with good adhesion to aluminum)
- IT 26403-67-8DP, PS120, reaction products with methyl(vinyl)cyclopentadienyl-tricarbonylmanganese 60718-82-3P 76810-82-7DP, reaction products with siloxanes 115254-29-0DP, PS537, reaction products with methyl(vinyl)cyclopentadienyl-tricarbonylmanganese 302591-26-0P  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(coatings containing organometallic polymer coupling agent with good adhesion to various substrates)
- IT **302597-40-6P**  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(coatings containing organometallic polymer coupling agent with good adhesion to various substrates)
- IT 471-34-1, Calcium carbonate, miscellaneous 1344-28-1, Alumina,

miscellaneous 7429-90-5, Aluminum, miscellaneous 7440-02-0, Nickel,  
 miscellaneous 7440-06-4, Platinum, miscellaneous 7440-22-4, Silver,  
 miscellaneous 7440-25-7, Tantalum, miscellaneous 7440-32-6, Titanium,  
 miscellaneous 7440-50-8, Copper, miscellaneous 7440-57-5, Gold,  
 miscellaneous 12597-68-1, Stainless steel, miscellaneous 12597-69-2,  
 Steel, miscellaneous 12597-71-6, Brass, miscellaneous

RL: MSC (Miscellaneous)

(coatings containing organometallic polymer coupling agent with good  
 adhesion to various substrates)

IT 1438-82-0, Pentamethyldisiloxane 12116-27-7,  
 Vinylcyclopentadienyltricarbonylmanganese

RL: RCT (Reactant); RACT (Reactant or reagent)

(coatings containing organometallic polymer coupling agent with good  
 adhesion to various substrates)

RE.CNT 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 RE

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- (2) Allara; Materials Science and Engineering 1986, VS3, P213
- (3) Anon; GB 1463816 1977
- (4) Anon; EP 0095269 A3 1983 HCAPLUS
- (5) Anon; GB 2106522 1983 HCAPLUS
- (6) Anon; EP 0321230 A3 1989
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- (8) Arkles; Chemtech 1977, P766 HCAPLUS
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- (15) Coombs; "Printed Circuits Handbook" 3rd ed 1989, P11.25
- (16) Cornils; US 4510182 1985 HCAPLUS
- (17) George; Thin Solid Films, 1980, V67, PL25 HCAPLUS
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- (26) Mevissen; US 5250085 1993 HCAPLUS
- (27) Mitsch; US 3810874 1974 HCAPLUS
- (28) Mitsch; US 4085137 1978 HCAPLUS
- (29) Mitsch; US 4094911 1978 HCAPLUS
- (30) Mittal, K; Adhesion Measurement of Thin Films, Thick Films & Bulk Coatings  
 1978, P5
- (31) Moren; US 4933373 1990 HCAPLUS
- (32) Nishide; J Am Chem Soc 1989, V111, P7175 HCAPLUS
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- (34) Pittman; Chem Tech 1971, P416 HCAPLUS
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- (36) Pittman; Macromolecules 1973, V6(1), P1 HCAPLUS
- (37) Plueddemann; J Adhesion 1970, V2, P184 HCAPLUS
- (38) Rembold; US 4997717 1991 HCAPLUS
- (39) Seyferth; ACS Symp Ser 1988, P143 HCAPLUS
- (40) Streitwieser; "Introduction to Organic Chemistry" 3rd ed 1985, P1103
- (41) Wagner; The Journal of Photographic Science 1981, V29, P230 HCAPLUS

(42) Wright; US 4503140 1985 HCAPLUS

IT **68003-11-2**

RL: TEM (Technical or engineered material use); USES (Uses)  
(binder adhesive; coatings containing organometallic polymer coupling agent  
with good adhesion to abrasive)

RN 68003-11-2 HCAPLUS

CN 9,12-Octadecadienoic acid (9Z,12Z)-, dimer, polymer with  
N-(2-aminoethyl)-1,2-ethanediamine, (chloromethyl)oxirane and  
4,4'-(1-methylethylidene)bis[phenol] (9CI) (CA INDEX NAME)

CM 1

CRN 111-40-0

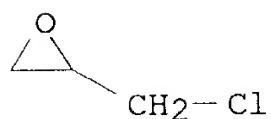
CMF C4 H13 N3



CM 2

CRN 106-89-8

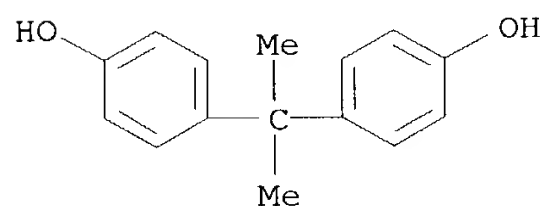
CMF C3 H5 Cl O



CM 3

CRN 80-05-7

CMF C15 H16 O2



CM 4

CRN 6144-28-1

CMF (C18 H32 O2) 2

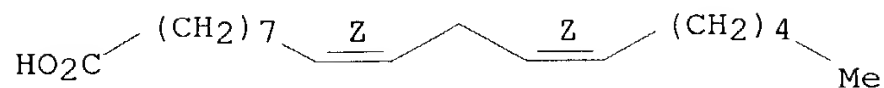
CCI PMS

CM 5

CRN 60-33-3

CMF C18 H32 O2

Double bond geometry as shown.



IT **302597-40-6P**

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(coatings containing organometallic polymer coupling agent with good adhesion to various substrates)

RN 302597-40-6 HCAPLUS

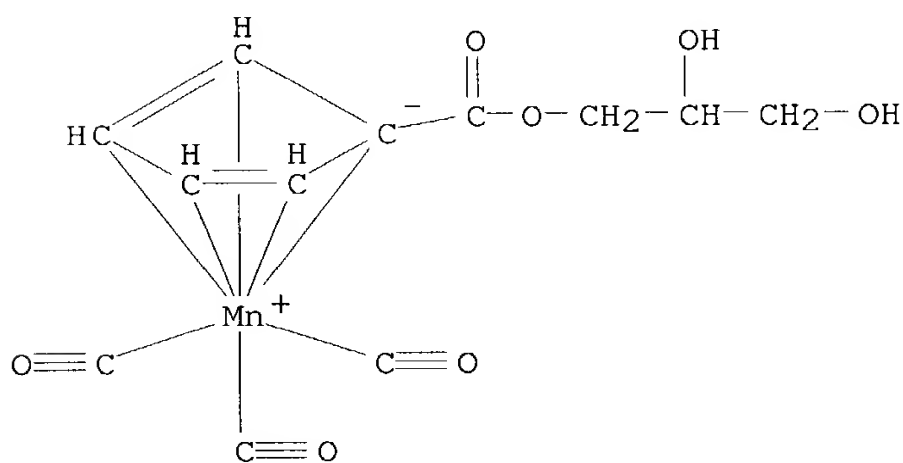
CN Manganese, tricarbonyl[(1,2,3,4,5-η)-1-[(2,3-dihydroxypropoxy)carbonyl]methyl-2,4-cyclopentadien-1-yl]-, polymer with 1,6-diisocyanatohexane and α-hydro-ω-hydroxypoly(oxy-1,2-ethanediyl), block (9CI) (CA INDEX NAME)

CM 1

CRN 302597-39-3

CMF C13 H13 Mn O7

CCI CCS, IDS



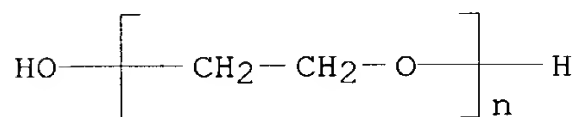
D1-Me

CM 2

CRN 25322-68-3

CMF (C2 H4 O)<sub>n</sub> H2 O

CCI PMS



CM 3

CRN 822-06-0  
CMF C8 H12 N2 O2

OCN- (CH<sub>2</sub>)<sub>6</sub>-NCO

L31 ANSWER 2 OF 8 HCAPLUS COPYRIGHT 2004 ACS on STN  
AN 1999:21599 HCAPLUS  
DN 130:96341  
ED Entered STN: 12 Jan 1999  
TI Hybrid nanocomposites comprising layered inorganic material and their preparation using particulate crosslinker composition  
IN Pinnavaia, Thomas J.; Lan, Tie  
PA Claytec, Inc., USA  
SO U.S., 17 pp.  
CODEN: USXXAM  
DT Patent  
LA English  
IC ICM B32B005-16  
ICS C08K009-00  
NCL 428403000  
CC 37-6 (Plastics Manufacture and Processing)  
Section cross-reference(s): 38  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5853886	A	19981229	US 1996-665518	19960617
	US 6017632	A	20000125	US 1998-137518	19980820
	US 6096803	A	20000801	US 1998-136939	19980820
PRAI	US 1996-665518	A3	19960617		

AB The particulate concentrate compns. are formed by intercalation of a polymer polymerizing component (e.g. crosslinker, reactive component, catalyst and having a basic group) into the galleries of a layered inorg. cation exchange composition (initially in proton-exchanged form such as a 2:1 layered silicate cation exchangers) for the preparation of cured polymer-inorg. nanolayer hybrid composites. A polymer precursor, a mixture of polymer precursors, or a polymer melt is introduced into the galleries of the inorg. cation exchanger and reacts with the polymer polymerizing component to form a cured polymer-inorg. nanolayer hybrid composite. Powdered Jeffamine D-2000 curing agent (precursor)-H<sup>+</sup> -montmorillonite concentrate (basal spacing 46 Å) was used to prepare epoxy polymer-exfoliated silicate nanocomposite.

ST polyetheramine silicate intercalate powd conc; epoxy resin clay nanocomposite; proton exchanged clay polyetheramine intercalate; exfoliated clay epoxy nanocomposite; mech property clay epoxy nanocomposite; solvent resistance clay epoxy nanocomposite; adhesiveness clay epoxy nanocomposite

IT Epoxy resins, preparation  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(also as epoxy clay powder concentrate; nanocomposite prepared using powdered

layered silicate/crosslinker concentrate)

IT Nanocomposites  
(comprising powdered layered silicate/crosslinker concentrate)

IT Alkyd resins



Aminoplasts  
 Phenolic resins, uses  
 Polyamides, uses  
 Polyesters, uses  
 Polyimides, uses  
 Polyolefins  
 Polyoxyalkylenes, uses  
 Polyoxymethylenes, uses  
 Polysiloxanes, uses  
 Polysulfides  
 Polyureas  
 Polyurethanes, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (nanocomposite prepared using powdered layered silicate/crosslinker concentrate)  
 IT Clays, properties  
 RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
 (smectitic; comprising powdered layered silicate/crosslinker concentrate for nanocomposite)  
 IT Plastics, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (thermosetting; nanocomposite prepared using powdered layered silicate/crosslinker concentrate)  
 IT **68003-11-2P**, Bisphenol A-epichlorohydrin-Versamid 125 copolymer  
**68311-01-3P**, Bisphenol A-epichlorohydrin-Versamid 140 copolymer  
 68318-44-5P, Bisphenol A-epichlorohydrin-Jeffamine D 2000 copolymer  
 111307-30-3P 122673-79-4P, Bisphenol A-epichlorohydrin-Jeffamine T 3000 copolymer  
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (nanocomposite prepared using powdered layered silicate/crosslinker concentrate)  
 IT 9003-08-1, Formaldehyde-melamine copolymer 9003-35-4, Formaldehyde-phenol copolymer **9011-05-6**, Formaldehyde-urea copolymer 24980-41-4, Polycaprolactone 25038-54-4, Poly[imino(1-oxo-1,6-hexanediyl)], uses 25248-42-4, Polycaprolactone 25322-68-3 26023-30-3, Poly[oxy(1-methyl-2-oxo-1,2-ethanediyl)] 26680-10-4, Polylactide  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (nanocomposite prepared using powdered layered silicate/crosslinker concentrate)  
 IT 1318-00-9, Vermiculite 1318-93-0, Montmorillonite, properties 12173-47-6, Fluorohectorite 12174-40-2, Rectorite 106495-23-2, Hydroxylhectorite ((Mg<sub>2.67</sub>Li<sub>0.33</sub>)Si<sub>4</sub>Na<sub>0.33</sub>[(OH)<sub>0.5</sub>-1F<sub>0</sub>-0.5]2O<sub>10</sub>)  
 RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
 (proton-exchanged; comprising powdered layered silicate/crosslinker concentrate for nanocomposite)

RE.CNT 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 RE

- (1) Anon; CA 1004859 1977
- (2) Anon; WO 9304117 1993 HCAPLUS
- (3) Anon; WO 9304118 1993 HCAPLUS
- (4) Bash; US 3432370 1969 HCAPLUS
- (5) Beall; US 5552469 1996 HCAPLUS
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- (20) Messersmith, P; Chem Mater 1993, V5, P1064 HCAPLUS
- (21) Novak, B; Adv Mater 1993, V5, P422 HCAPLUS
- (22) Pinnavaia; US 5726113 1998 HCAPLUS
- (23) Pinnavaia; US 5760106 1998 HCAPLUS
- (24) Pinnavaia, T; Science 1983, V220, P365 HCAPLUS
- (25) Stevens; US 3511725 1970 HCAPLUS
- (26) Sugahara, Y; J Ceram Soc Jpn 1992, V100, P413 HCAPLUS
- (27) Tani; US 5527871 1996 HCAPLUS
- (28) Usuki; US 4889885 1989 HCAPLUS
- (29) Usuki, A; J Mater Res 1993, V8, P1179 HCAPLUS
- (30) Vaia; Advanced materials) 1995, V7, P154 HCAPLUS
- (31) Vaia, R; Chem Mater 1993, V5, P1694 HCAPLUS

IT **68003-11-2P**, Bisphenol A-epichlorohydrin-Versamid 125 copolymer  
**68311-01-3P**, Bisphenol A-epichlorohydrin-Versamid 140 copolymer  
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or  
 engineered material use); PREP (Preparation); USES (Uses)  
 (nanocomposite prepared using powdered layered silicate/crosslinker  
 concentrate)

RN 68003-11-2 HCAPLUS

CN 9,12-Octadecadienoic acid (9Z,12Z)-, dimer, polymer with  
 N-(2-aminoethyl)-1,2-ethanediamine, (chloromethyl)oxirane and  
 4,4'-(1-methylethylidene)bis[phenol] (9CI) (CA INDEX NAME)

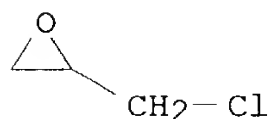
CM 1

CRN 111-40-0  
 CMF C4 H13 N3



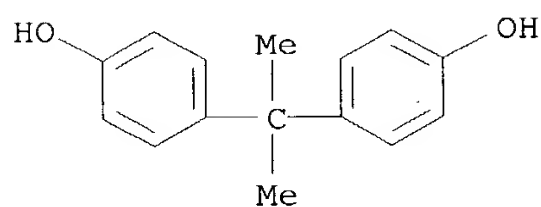
CM 2

CRN 106-89-8  
 CMF C3 H5 Cl O



CM 3

CRN 80-05-7  
CMF C15 H16 O2



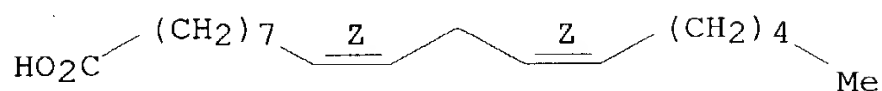
CM 4

CRN 6144-28-1  
CMF (C18 H32 O2)2  
CCI PMS

CM 5

CRN 60-33-3  
CMF C18 H32 O2

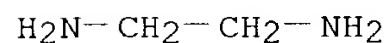
Double bond geometry as shown.



RN 68311-01-3 HCAPLUS  
CN 9,12-Octadecadienoic acid (9Z,12Z)-, dimer, polymer with (chloromethyl)oxirane, 1,2-ethanediamine and 4,4'-(1-methylethylidene)bis[phenol] (9CI) (CA INDEX NAME)

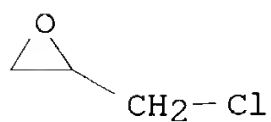
CM 1

CRN 107-15-3  
CMF C2 H8 N2



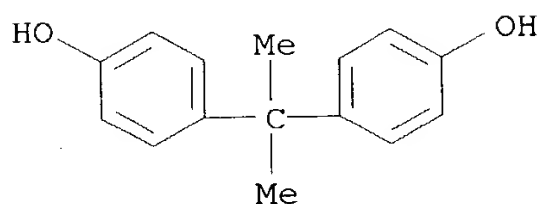
CM 2

CRN 106-89-8  
CMF C3 H5 Cl O



CM 3

CRN 80-05-7  
CMF C15 H16 O2



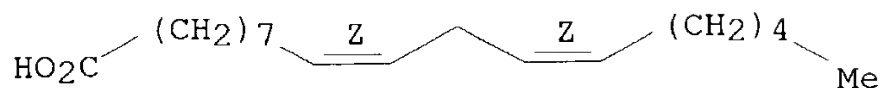
CM 4

CRN 6144-28-1  
CMF (C18 H32 O2)2  
CCI PMS

CM 5

CRN 60-33-3  
CMF C18 H32 O2

Double bond geometry as shown.



IT **9011-05-6**, Formaldehyde-urea copolymer

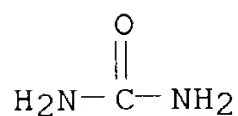
RL: TEM (Technical or engineered material use); USES (Uses)  
(nanocomposite prepared using powdered layered silicate/crosslinker concentrate)

RN 9011-05-6 HCAPLUS

CN Urea, polymer with formaldehyde (9CI) (CA INDEX NAME)

CM 1

CRN 57-13-6  
CMF C H4 N2 O



CM 2

CRN 50-00-0  
CMF C H2 O

H<sub>2</sub>C=O

L31 ANSWER 3 OF 8 HCAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1998:693523 HCAPLUS  
 DN 130:14606  
 ED Entered STN: 02 Nov 1998  
 TI Room temperature-curable syrup compositions containing modified epoxy esters, and polymer mortar or concrete and lining materials therefrom  
 IN Iwasaki, Kazuhiko; Aoki, Toshikazu; Takasu, Mikio  
 PA Mitsubishi Rayon Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 11 pp.  
 CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C08L033-04

ICS C04B026-04; C08L063-10; C08L067-07; C08L075-16; C08F299-00;  
C04B111-54

CC 37-6 (Plastics Manufacture and Processing)  
 Section cross-reference(s): 38, 58

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 10287788	A2	19981027	JP 1997-92235	19970410
PRAI	JP 1997-92235		19970410		

AB Title compns. contain (A) modified epoxy esters  
 $R_2CO_2CH_2CH(OH)R_1CH(OH)CH_2OCOR_3$  ( $R_1$  = epoxy resin residue;  $R_2-3$  = monobasic acid residue), (B)  $\geq 1$  air-curable allyl ether-containing polymers selected from unsatd. polyesters, vinyl ester polymers, and polyurethanes, and (C) vinyl comonomers at weight ratio (A + B)/C 30/70-80/20. The polymer mortar or concrete contain the compns., inorg. fillers, and aggregates. The lining materials contain the compns. and fiber reinforcements and/or fillers. Thus, a composition containing a half ester prepared from phthalic anhydride, Adeka Polyether BPX 1000 (polyol), and Neoallyl P 30 (pentaerythritol triallyl ether), Acryester DM (dimethylaminoethyl methacrylate), Acryester M (Me methacrylate), Epikote 828 2-ethylhexanoate methacrylate, and 2-ethylhexyl methacrylate was mixed with an inorg. filler, an aggregate, benzoyl peroxide, and Co naphthoate and cured to give a test piece showing bending strength 220 kg/cm<sup>2</sup> and compression strength 290 kg/cm<sup>2</sup>.

ST epoxy ester syrup polymer mortar; concrete polymer epoxy ester syrup; lining material epoxy ester syrup; allyl ether polyester concrete epoxy ester; vinyl ester allyl ether concrete; polyurethane allyl ether concrete epoxy ester

IT Epoxy resins, preparation

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(acrylic-polyester-; room temperature-curable syrup compns. containing modified

epoxy esters for polymer concrete and lining materials)

IT Polyurethanes, preparation

Polyurethanes, preparation

Polyurethanes, preparation

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(epoxy-polyester-, acrylic; room temperature-curable syrup compns. containing

modified epoxy esters for polymer concrete and lining materials)

IT Polyesters, preparation  
Polyesters, preparation  
Polyesters, preparation  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(epoxy-polyurethane-, acrylic; room temperature-curable syrup compns. containing modified epoxy esters for polymer concrete and lining materials)

IT Coating materials  
(linings; room temperature-curable syrup compns. containing modified epoxy esters for polymer concrete and lining materials)

IT Epoxy resins, preparation  
Epoxy resins, preparation  
Epoxy resins, preparation  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polyester-polyurethane-, acrylic; room temperature-curable syrup compns. containing modified epoxy esters for polymer concrete and lining materials)

IT Polymer concrete  
(room temperature-curable syrup compns. containing modified epoxy esters for polymer concrete and lining materials)

IT **216163-24-5P** 216163-25-6P 216165-35-4P **216165-37-6P**  
216165-38-7P **216165-39-8P**  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(room temperature-curable syrup compns. containing modified epoxy esters for polymer concrete and lining materials)

IT **216163-24-5P 216165-37-6P 216165-39-8P**  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(room temperature-curable syrup compns. containing modified epoxy esters for polymer concrete and lining materials)

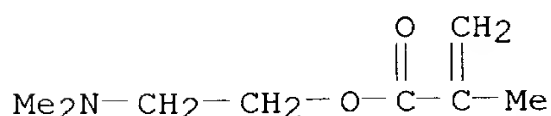
RN 216163-24-5 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-(dimethylamino)ethyl ester, polymer with (chloromethyl)oxirane polymer with 4,4'-(1-methylethylidene)bis[phenol] and  $\alpha$ -(oxiranylmethyl)- $\omega$ -(oxiranylmethoxy)poly[oxy(methyl-1,2-ethanediyl)] 2-methyl-2-propenoate, 1,6-diisocyanatohexane, 2-ethylhexyl 2-propenoate, 2-hydroxyethyl 2-propenoate, methyl 2-methyl-2-propenoate and 3-(2-propenyloxy)-2,2-bis[(2-propenyloxy)methyl]-1-propanol (9CI) (CA INDEX NAME)

CM 1

CRN 2867-47-2

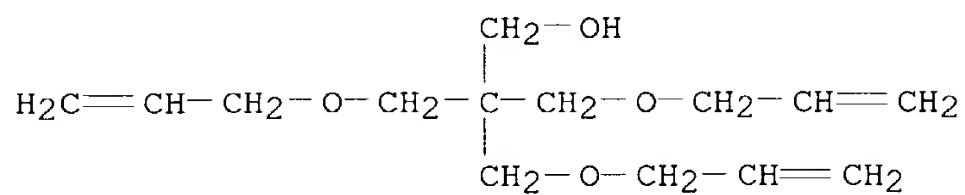
CMF C8 H15 N O2



CM 2

CRN 1471-17-6

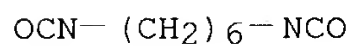
CMF C14 H24 O4



CM 3

CRN 822-06-0

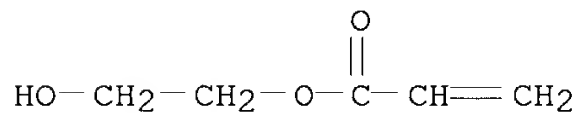
CMF C8 H12 N2 O2



CM 4

CRN 818-61-1

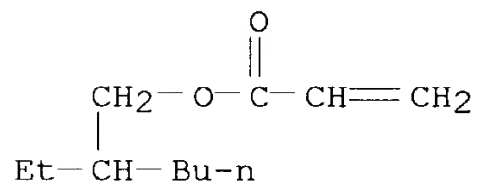
CMF C5 H8 O3



CM 5

CRN 103-11-7

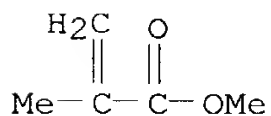
CMF C11 H20 O2



CM 6

CRN 80-62-6

CMF C5 H8 O2





CM 7

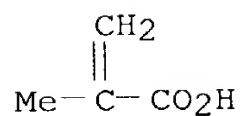
CRN 216163-23-4

CMF (C15 H16 O2 . (C3 H6 O)n C6 H10 O3 . C3 H5 Cl O)x . x C4 H6 O2

CM 8

CRN 79-41-4

CMF C4 H6 O2



CM 9

CRN 77553-52-7

CMF (C15 H16 O2 . (C3 H6 O)n C6 H10 O3 . C3 H5 Cl O)x

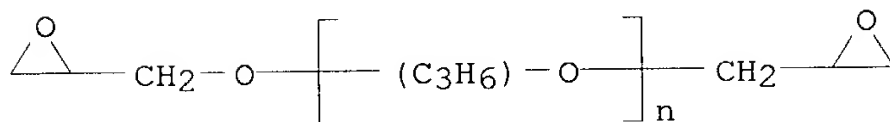
CCI PMS

CM 10

CRN 26142-30-3

CMF (C3 H6 O)n C6 H10 O3

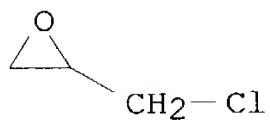
CCI IDS, PMS



CM 11

CRN 106-89-8

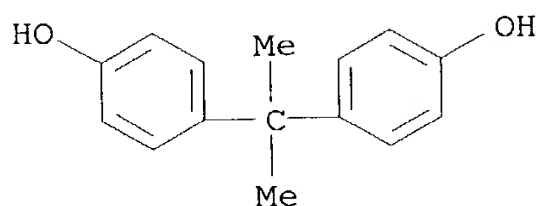
CMF C3 H5 Cl O



CM 12

CRN 80-05-7

CMF C15 H16 O2



RN 216165-37-6 HCAPLUS

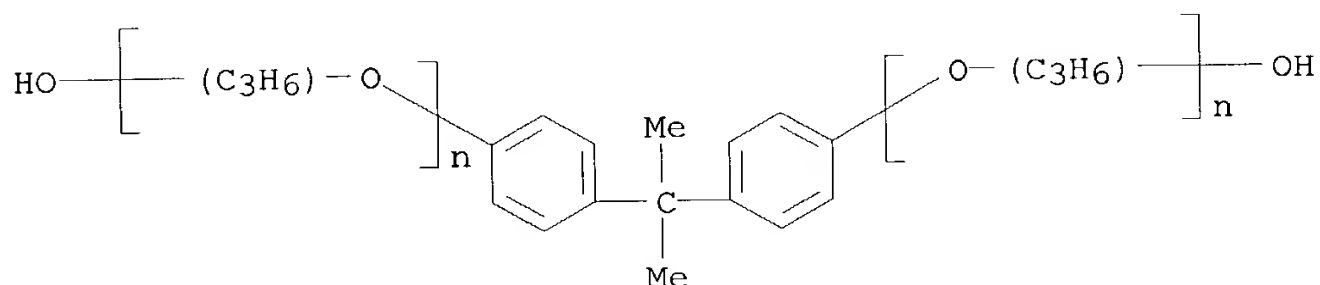
CN 2-Propenoic acid, 2-methyl-, 2-(dimethylamino)ethyl ester, polymer with (chloromethyl)oxirane polymer with 4,4'-(1-methylethylidene)bis[phenol] 2-methyl-2-propenoate (9Z)-9-octadecenoate, 2-ethylhexyl 2-methyl-2-propenoate, 1,3-isobenzofurandione,  $\alpha, \alpha'$ -[(1-methylethylidene)di-4,1-phenylene]bis[ $\omega$ -hydroxypoly[oxy(methyl-1,2-ethanediyl)]]], methyl 2-methyl-2-propenoate and 3-(2-propenyloxy)-2,2-bis[(2-propenyloxy)methyl]-1-propanol (9CI) (CA INDEX NAME)

CM 1

CRN 37353-75-6

CMF (C3 H6 O)<sub>n</sub> (C3 H6 O)<sub>n</sub> C15 H16 O2

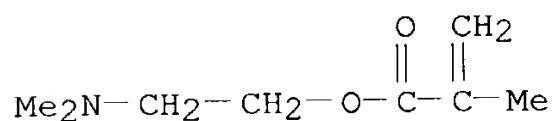
CCI IDS, PMS



CM 2

CRN 2867-47-2

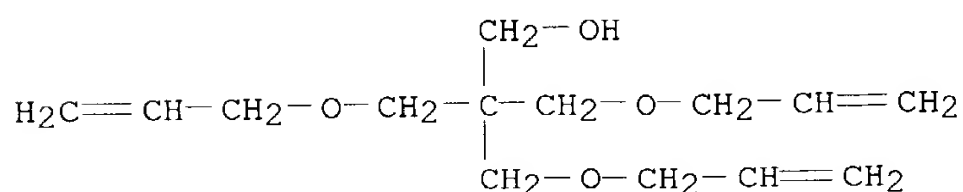
CMF C8 H15 N O2



CM 3

CRN 1471-17-6

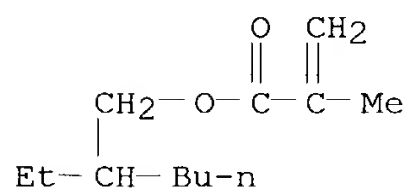
CMF C14 H24 O4



CM 4

CRN 688-84-6

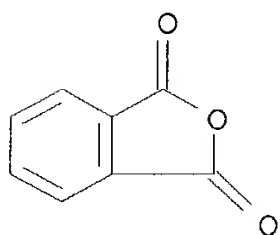
CMF C12 H22 O2



CM 5

CRN 85-44-9

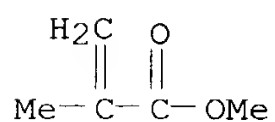
CMF C8 H4 O3



CM 6

CRN 80-62-6

CMF C5 H8 O2



CM 7

CRN 216165-36-5

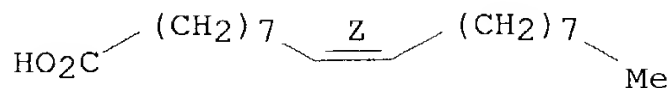
CMF C18 H34 O2 . x (C15 H16 O2 . C3 H5 Cl O)x . x C4 H6 O2

CM 8

CRN 112-80-1

CMF C18 H34 O2

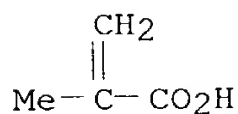
Double bond geometry as shown.



CM 9

CRN 79-41-4

CMF C4 H6 O2



CM 10

CRN 25068-38-6

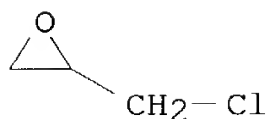
CMF (C15 H16 O2 . C3 H5 Cl O) x

CCI PMS

CM 11

CRN 106-89-8

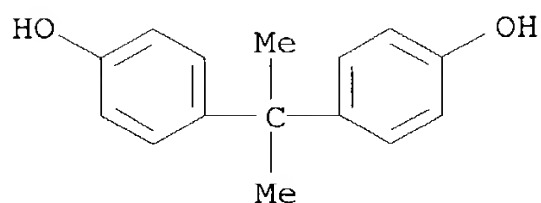
CMF C3 H5 Cl O



CM 12

CRN 80-05-7

CMF C15 H16 O2



RN 216165-39-8 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-(dimethylamino)ethyl ester, polymer with (chloromethyl)oxirane polymer with 4,4'-(1-methylethylidene)bis[phenol] 2-ethylhexanoate 2-methyl-2-propenoate, 1,6-diisocyanatohexane, 2-ethylhexyl 2-propenoate, 2-hydroxyethyl 2-propenoate, 1,3-isobenzofurandione, methyl 2-methyl-2-propenoate,  $\alpha,\alpha'$ -[(1-methylethylidene)di-4,1-phenylene]bis[ $\omega$ -hydroxypoly[oxy(methyl-1,2-ethanediyl)]] and 3-(2-propenyloxy)-2,2-bis[(2-propenyloxy)methyl]-1-

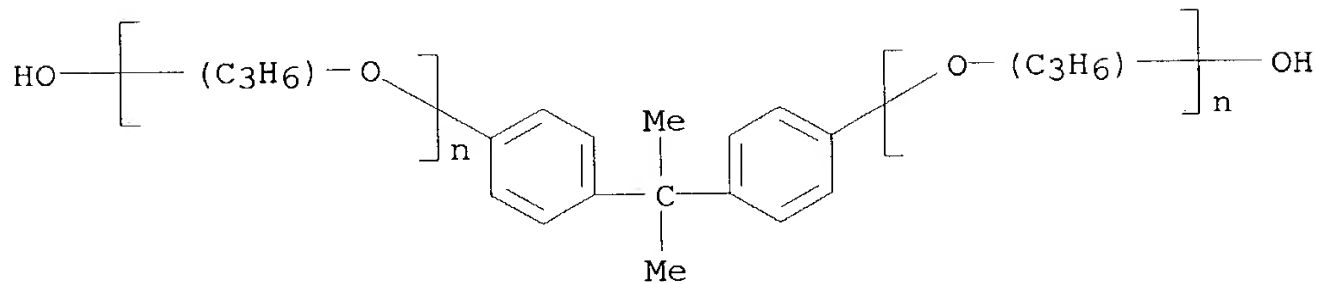
propanol (9CI) (CA INDEX NAME)

CM 1

CRN 37353-75-6

CMF (C3 H6 O)<sub>n</sub> (C3 H6 O)<sub>n</sub> C15 H16 O2

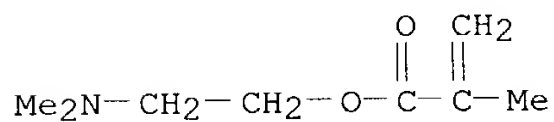
CCI IDS, PMS



CM 2

CRN 2867-47-2

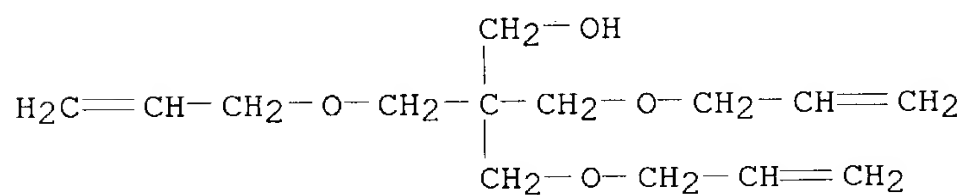
CMF C8 H15 N O2



CM 3

CRN 1471-17-6

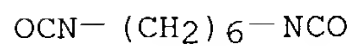
CMF C14 H24 O4



CM 4

CRN 822-06-0

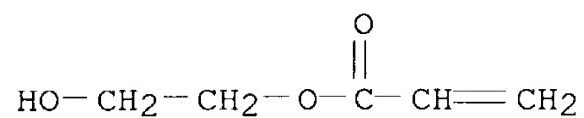
CMF C8 H12 N2 O2



CM 5

CRN 818-61-1

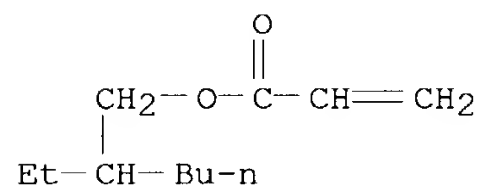
CMF C5 H8 O3



CM 6

CRN 103-11-7

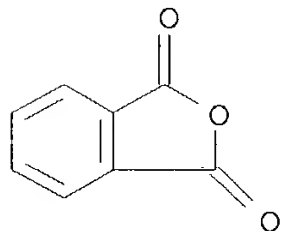
CMF C11 H20 O2



CM 7

CRN 85-44-9

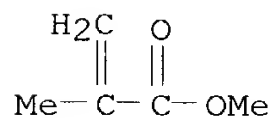
CMF C8 H4 O3



CM 8

CRN 80-62-6

CMF C5 H8 O2



CM 9

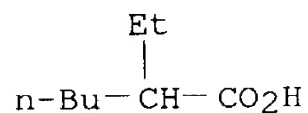
CRN 216165-34-3

CMF (C15 H16 O2 . C3 H5 Cl O)x . x C8 H16 O2 . x C4 H6 O2

CM 10

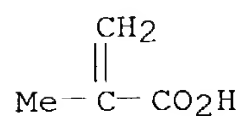
CRN 149-57-5

CMF C8 H16 O2



CM 11

CRN 79-41-4  
CMF C4 H6 O2

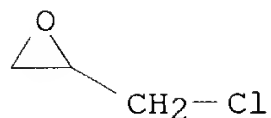


CM 12

CRN 25068-38-6  
CMF (C15 H16 O2 . C3 H5 Cl O)x  
CCI PMS

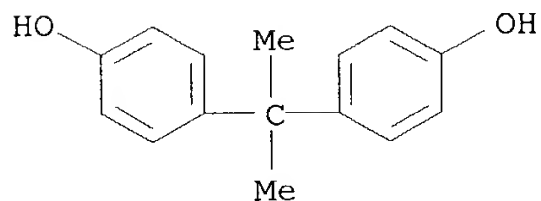
CM 13

CRN 106-89-8  
CMF C3 H5 Cl O



CM 14

CRN 80-05-7  
CMF C15 H16 O2



L31 ANSWER 4 OF 8 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1997:705884 HCAPLUS

DN 127:359651

ED Entered STN: 08 Nov 1997

TI Abrasive articles and methods of making endless seamless abrasive articles

KATHLEEN FULLER EIC 1700 REMSEN 4B28 571/272-2505



IN Benedict, Harold W.; Schneider, Michael J.; Bange, Donna W.; Heacox, Gary  
 L.; Trudeau, Timothy J.; Krishnan, Subramanian  
 PA Minnesota Mining and Manufacturing Co., USA  
 SO U.S., 46 pp., Cont.-in-part of U.S. Ser. No. 242,295, abandoned.  
 CODEN: USXXAM

DT Patent

LA English

IC ICM B05D003-12

ICS B05D005-02; B05D001-38; B24D011-06

NCL 427240000

CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 42, 57

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5681612	A	19971028	US 1996-602546	19960220
	CA 2182495	AA	19950824	CA 1995-2182495	19950127
	EP 746447	A1	19961211	EP 1995-908699	19950127
	EP 746447	B1	20010418		
	R: CH, DE, ES, FR, GB, IT, LI, SE				
	JP 09509105	T2	19970916	JP 1995-521810	19950127
	ZA 9500935	A	19960806	ZA 1995-935	19950206
PRAI	US 1993-79364	B2	19930617		
	US 1994-199679	B3	19940222		
	US 1994-242295	B2	19940513		
	US 1995-443322	B2	19950517		
	WO 1995-US1082	W	19950127		
AB	A fibrous material is inserted adjacent an interior surface of a drum, a composition comprising an organic binder precursor material is then placed in the drum, and the drum is rotated such that centrifugal forces distribute the composition, including the organic binder precursor material, uniformly about the fibrous material. The composition is exposed to conditions sufficient to solidify the organic binder precursor material such that an endless, flexible, seamless substrate is formed having an outer surface formed adjacent the interior surface of the drum, an inner surface opposite the outer surface and the embedded fibrous material.				
ST	fiber reinforced composite backing abrasive; endless seamless abrasive belt; thermoset fiber reinforced backing abrasive article; strength backing fiber reinforced composite belt				
IT	Urethane rubber, uses RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses) (B-813; binder for making endless seamless abrasive articles such as coated abrasive belts and backings for abrasive belts)				
IT	Belts (binder for making endless seamless abrasive articles such as coated abrasive belts and backings for abrasive belts)				
IT	Epoxy resins, uses RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses) (binder for making endless seamless abrasive articles such as coated abrasive belts and backings for abrasive belts)				
IT	Polyureas Polyurethanes, uses RL: TEM (Technical or engineered material use); USES (Uses) (binder for making endless seamless abrasive articles such as coated				

abrasive belts and backings for abrasive belts)

IT Polyamides, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (fiber; with binder for making endless seamless abrasive articles such as coated abrasive belts and backings for abrasive belts)

IT Fiber-reinforced composites  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (for making endless seamless abrasive articles such as coated abrasive belts and backings for abrasive belts)

IT Abrasives  
 Nonwoven fabrics  
 (with binder for making endless seamless abrasive articles such as coated abrasive belts and backings for abrasive belts)

IT Glass fibers, uses  
 Polyamide fibers, uses  
 Polyester fibers, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (with binder for making endless seamless abrasive articles such as coated abrasive belts and backings for abrasive belts)

IT 1344-28-1, Aluminum oxide, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (abrasive; with binder for making endless seamless abrasive articles such as coated abrasive belts and backings for abrasive belts)

IT 198284-63-8 **198289-06-4 198289-07-5** 198564-87-3,  
 Blendur P 140M;Blendur P 120M;Baymidur VP-KU 3-5006 copolymer  
 RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
 (binder for making endless seamless abrasive articles such as coated abrasive belts and backings for abrasive belts)

IT **82115-76-2**, Neorez R-966 148894-36-4, PAPI 2020-Versalink 1000 copolymer 148894-37-5 **198284-60-5** 198284-61-6, AC 39-epichlorohydrin-bisphenol A copolymer 198284-62-7, Witcobond 290H-Witcobond XW copolymer 198497-01-7, HPR 625FS 198564-84-0, Isonate 143L-Versalink 2000 copolymer  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (binder for making endless seamless abrasive articles such as coated abrasive belts and backings for abrasive belts)

IT **32131-17-2**, Nylon 66, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (fiber; with binder for making endless seamless abrasive articles such as coated abrasive belts and backings for abrasive belts)

IT **198289-06-4 198289-07-5**  
 RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
 (binder for making endless seamless abrasive articles such as coated abrasive belts and backings for abrasive belts)

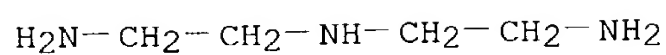
RN 198289-06-4 HCAPLUS

CN 9,12-Octadecadienoic acid (9Z,12Z)-, dimer, polymer with N-(2-aminoethyl)-1,2-ethanediamine, (chloromethyl)oxirane, 4,4'-(1-methylethylidene)bis[phenol] and (9Z,12Z)-9,12-octadecadienoic acid dimer bis(oxiranylmethyl) ester (9CI) (CA INDEX NAME)

CM 1

CRN 111-40-0

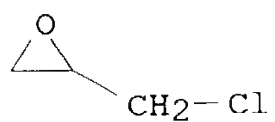
CMF C4 H13 N3



CM 2

CRN 106-89-8

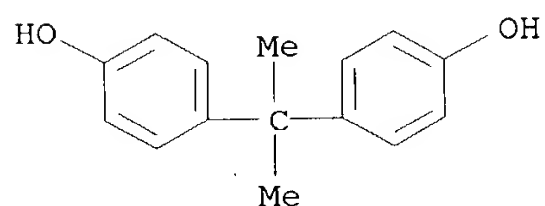
CMF C3 H5 Cl O



CM 3

CRN 80-05-7

CMF C15 H16 O2



CM 4

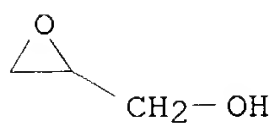
CRN 58856-69-2

CMF (C18 H32 O2)2 . 2 C3 H6 O2

CM 5

CRN 556-52-5

CMF C3 H6 O2



CM 6

CRN 6144-28-1

CMF (C18 H32 O2)2

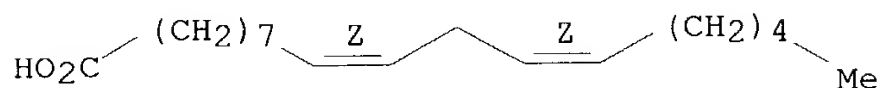
CCI PMS

CM 7

CRN 60-33-3

CMF C18 H32 O2

Double bond geometry as shown.



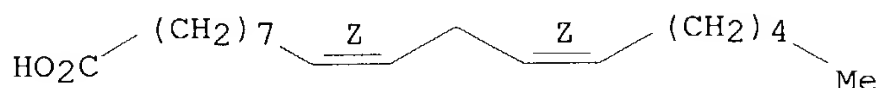
CM 8

CRN 6144-28-1  
CMF (C18 H32 O2)2  
CCI PMS

CM 9

CRN 60-33-3  
CMF C18 H32 O2

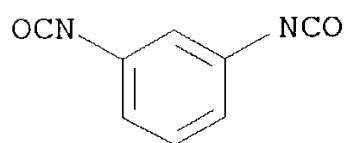
Double bond geometry as shown.



RN 198289-07-5 HCAPLUS  
CN 9,12-Octadecadienoic acid (9Z,12Z)-, dimer, polymer with  
N-(2-aminoethyl)-1,2-ethanediamine, (chloromethyl)oxirane,  
1,3-diisocyanatomethylbenzene,  $\alpha$ -hydro- $\omega$ -hydroxypoly(oxy-1,4-  
butanediyl), 4,4'-(1-methylethylidene)bis[phenol] and (9Z,12Z)-9,12-  
octadecadienoic acid dimer bis(oxiranylmethyl) ester (9CI) (CA INDEX  
NAME)

CM 1

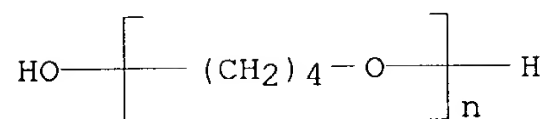
CRN 26471-62-5  
CMF C9 H6 N2 O2  
CCI IDS



D1-Me

CM 2

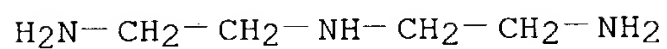
CRN 25190-06-1  
CMF (C4 H8 O)n H2 O  
CCI PMS



CM 3

CRN 111-40-0

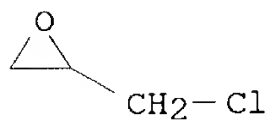
CMF C4 H13 N3



CM 4

CRN 106-89-8

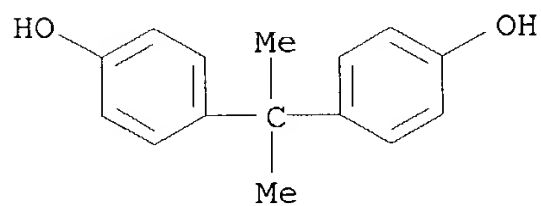
CMF C3 H5 Cl O



CM 5

CRN 80-05-7

CMF C15 H16 O2



CM 6

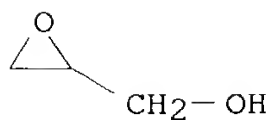
CRN 58856-69-2

CMF (C18 H32 O2)2 . 2 C3 H6 O2

CM 7

CRN 556-52-5

CMF C3 H6 O2



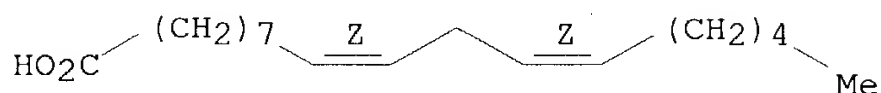
CM 8

CRN 6144-28-1  
CMF (C18 H32 O2)2  
CCI PMS

CM 9

CRN 60-33-3  
CMF C18 H32 O2

Double bond geometry as shown.



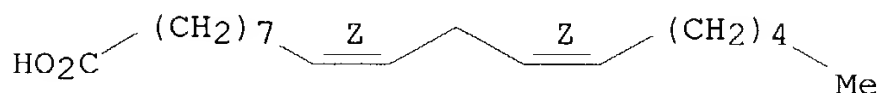
CM 10

CRN 6144-28-1  
CMF (C18 H32 O2)2  
CCI PMS

CM 11

CRN 60-33-3  
CMF C18 H32 O2

Double bond geometry as shown.



IT **82115-76-2, Neorez R-966 198284-60-5**

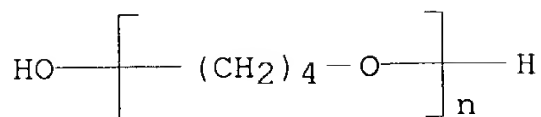
RL: TEM (Technical or engineered material use); USES (Uses)  
(binder for making endless seamless abrasive articles such as coated  
abrasive belts and backings for abrasive belts)

RN 82115-76-2 HCAPLUS

CN Propanoic acid, 3-hydroxy-2-(hydroxymethyl)-2-methyl-, polymer with  
 $\alpha$ -hydro- $\omega$ -hydroxypoly(oxy-1,4-butanediyl) and  
5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane, block (9CI)  
(CA INDEX NAME)

CM 1

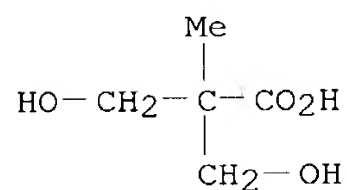
CRN 25190-06-1  
CMF (C4 H8 O)n H2 O  
CCI PMS



CM 2

CRN 4767-03-7

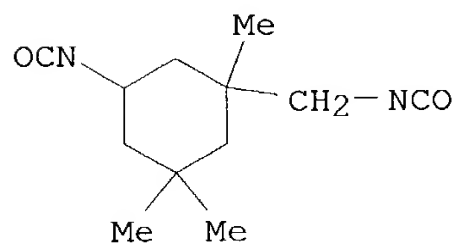
CMF C5 H10 O4



CM 3

CRN 4098-71-9

CMF C12 H18 N2 O2



RN 198284-60-5 HCAPLUS

CN Phenol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane, 1,3-diisocyanatomethylbenzene, Genamid 747, α-hydro-ω-hydroxypoly(oxy-1,4-butanediyl) and methanedianiline (9CI) (CA INDEX NAME)

CM 1

CRN 89338-65-8

CMF Unspecified

CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

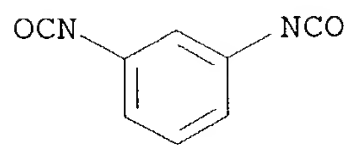
CM 2

CRN 26471-62-5

CMF C9 H6 N2 O2

CCI IDS

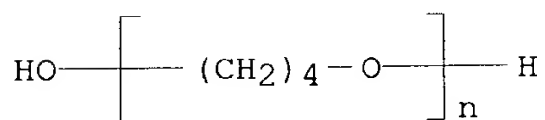




D1-Me

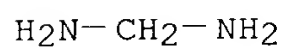
CM 3

CRN 25190-06-1  
CMF (C4 H8 O)n H2 O  
CCI PMS



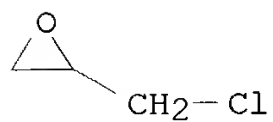
CM 4

CRN 2372-88-5  
CMF C H6 N2



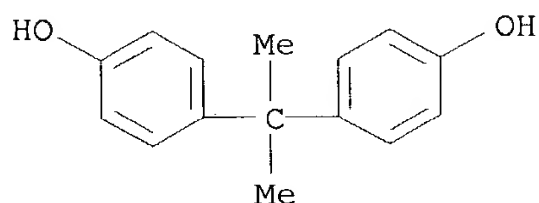
CM 5

CRN 106-89-8  
CMF C3 H5 Cl O

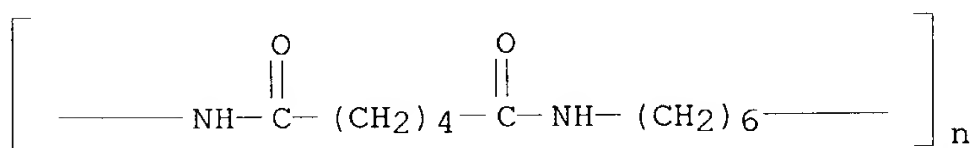


CM 6

CRN 80-05-7  
CMF C15 H16 O2



IT **32131-17-2**, Nylon 66, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (fiber; with binder for making endless seamless abrasive articles such  
 as coated abrasive belts and backings for abrasive belts)  
 RN 32131-17-2 HCAPLUS  
 CN Poly[imino(1,6-dioxo-1,6-hexanediyl)imino-1,6-hexanediyl] (9CI) (CA INDEX  
 NAME)



L31 ANSWER 5 OF 8 HCAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1997:80464 HCAPLUS  
 DN 126:89938  
 ED Entered STN: 05 Feb 1997  
 TI Epoxy resins consisting of flexible chains terminated with  
 glycidyloxyphenyl groups for use in microelectronics adhesives  
 IN Schultz, Rose Ann  
 PA National Starch and Chemical Investment Holding Corporation, USA  
 SO Eur. Pat. Appl., 27 pp.  
 CODEN: EPXXDW  
 DT Patent  
 LA English  
 IC ICM C07D303-46  
 ICS C07D303-44; C08G059-02  
 CC 35-7 (Chemistry of Synthetic High Polymers)  
 Section cross-reference(s): 38, 76

FAN.CNT 4

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 747371	A1	19961211	EP 1996-109063	19960605
	EP 747371	B1	20000906		
	R: CH, DE, FR, GB, IT, LI, NL				
	US 5717054	A	19980210	US 1996-656619	19960531
PRAI	US 1995-482541	A	19950607		
	US 1996-656619	A	19960531		
AB	The flexible chain of the title epoxy compds. comprise an oligomeric backbone of alkylene or alkyleneoxy repeat units, connected to glycidyloxyphenyl groups (GOP) through carbamate, amide, ester or anhydride linkages. Thus, Et 3-hydroxybenzoate was heated with epichlorohydrin in the presence of KCO <sub>3</sub> to give Et 3-glycidoxybenzoate, which was hydrolyzed to 3-glycidoxybenzoic acid and added to a solution containing a C-36 diamine (Versamine 552) in dehydration coupling process to produce a C-36 diamide having GOP terminal groups.				
ST	epoxy resin long chain diamine coupled; adhesive electronic flexible epoxy				

- resin; glycidoxybenzoic acid reaction diamine
- IT Fatty acids, preparation  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (C18-unsatd., dimers and trimers, glycidoxybenzyl ester, polymers, Empol 1024; epoxy resins consisting of flexible chains terminated with glycidyloxyphenyl groups for use in microelectronics adhesives)
- IT Epoxy resins, preparation  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (based on glycidyloxyphenyl terminated flexible alkylene; epoxy resins consisting of flexible chains terminated with glycidyloxyphenyl groups for use in microelectronics adhesives)
- IT Carboxylic acids, preparation  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (dicarboxylic, C10-12, glycidoxybenzyl esters, polymers, Corfree M 1; epoxy resins consisting of flexible chains terminated with glycidyloxyphenyl groups for use in microelectronics adhesives)
- IT Adhesives  
 (epoxy resins consisting of flexible chains terminated with glycidyloxyphenyl groups for use in microelectronics adhesives)
- IT **53123-30-1P** 185522-14-9P  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (adhesive for bonding silicon chip to metal lead frame)
- IT 185522-04-7DP, reaction products with Versamine 552; homopolymer or polymers with Epon 828  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (dehydration coupling with long chain diamine or fatty acid dimer; epoxy resins consisting of flexible chains terminated with glycidyloxyphenyl groups for use in microelectronics adhesives)
- IT 185522-04-7  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (dehydration coupling with long chain diamine or fatty acid dimer; in epoxy resins manufacture)
- IT 185522-13-8P  
 RL: IMF (Industrial manufacture); PREP (Preparation)  
 (epoxy resins consisting of flexible chains terminated with glycidyloxyphenyl groups for use in microelectronics adhesives)
- IT 9085-51-2P, Epon 871 39340-26-6DP, DDI 1410, glycidoxybenzyl carbamate of, polymers 126968-43-2DP, Versamine 552, reaction products with 3-glycidoxybenzoic acid; homopolymer or polymers with Epon 828  
 185522-06-9P **185522-08-1P** 185522-10-5P  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (epoxy resins consisting of flexible chains terminated with glycidyloxyphenyl groups for use in microelectronics adhesives)
- IT 104354-26-9  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (hydrolysis; in epoxy resins manufacture)
- IT 106-89-8, reactions  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction with Et hydroxybenzoate; in epoxy resins manufacture)
- IT 35217-87-9  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction with dimer acid; in epoxy resins manufacture)

IT 620-24-6, 3-Hydroxybenzyl alcohol 7781-98-8, Ethyl 3-hydroxybenzoate  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction with epichlorohydrin; in epoxy resins manufacture)

IT 126968-43-2, Versamine 552  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction with glycidoxybenzoic acid; in epoxy resins manufacture)

IT 124-07-2, Octanoic acid, reactions  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction with glycidoxybenzyl alc.; in manufacture of reactive diluent)

IT 185522-11-6P  
 RL: IMF (Industrial manufacture); PREP (Preparation)  
 (reactive diluent)

IT 25068-38-6DP, polymers with Versamine 552 bis(3-glycidyloxybenzamide)  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material  
 use); PREP (Preparation); USES (Uses)  
 (silver flake containing; adhesive for bonding silicon chip to metal lead  
 frame)

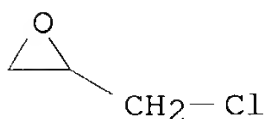
IT **53123-30-1P**  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material  
 use); PREP (Preparation); USES (Uses)  
 (adhesive for bonding silicon chip to metal lead frame)

RN 53123-30-1 HCAPLUS  
 CN 9,12-Octadecadienoic acid (9Z,12Z)-, dimer, bis(oxiranylmethyl) ester,  
 polymer with (chloromethyl)oxirane and 4,4'-(1-  
 methylethylidene)bis[phenol] (9CI) (CA INDEX NAME)

CM 1

CRN 106-89-8

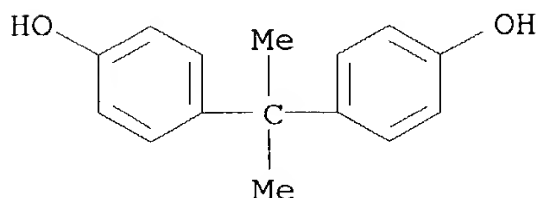
CMF C3 H5 Cl O



CM 2

CRN 80-05-7

CMF C15 H16 O2



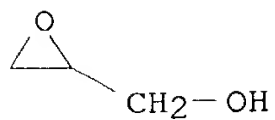
CM 3

CRN 58856-69-2

CMF (C18 H32 O2)2 . 2 C3 H6 O2

CM 4

CRN 556-52-5  
CMF C3 H6 O2



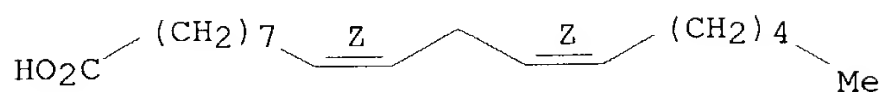
CM 5

CRN 6144-28-1  
CMF (C18 H32 O2)2  
CCI PMS

CM 6

CRN 60-33-3  
CMF C18 H32 O2

Double bond geometry as shown.



IT **185522-08-1P**

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(epoxy resins consisting of flexible chains terminated with glycidyloxyphenyl groups for use in microelectronics adhesives)

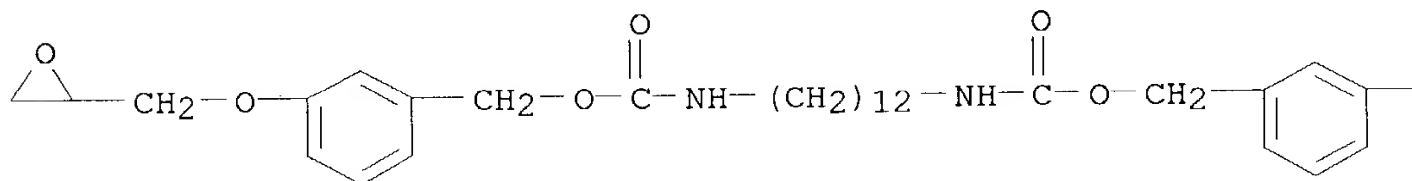
RN 185522-08-1 HCAPLUS

CN Carbamic acid, 1,12-dodecanediylbis-, bis[[3-(oxiranylmethoxy)phenyl]methyl] ester, homopolymer (9CI) (CA INDEX NAME)

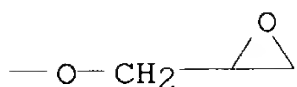
CM 1

CRN 185522-07-0  
CMF C34 H48 N2 O8

PAGE 1-A



PAGE 1-B



L31 ANSWER 6 OF 8 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1995:842426 HCAPLUS

DN 123:288755

ED Entered STN: 10 Oct 1995

TI Integral-skin microcellular structures, their formation and applications

IN McClellan, Thomas Roy; Mizulo, John T.; Nelson, Edwin S.; Pato, Grant R.

PA Urethane Technologies, Inc., USA

SO PCT Int. Appl., 48 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM C08J009-34

ICS C08F110-00; C08F210-00; C08F014-06; C08F036-04; C08G018-06;  
C08G018-08; B32B005-14

CC 38-2 (Plastics Fabrication and Uses)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9508590	A1	19950330	WO 1994-US10633	19940920
	W: AM, AU, BB, BG, BR, BY, CA, CN, CZ, FI, GE, HU, JP, KG, KP, KR, KZ, LK, LT, LV, MD, MG, MN, NO, NZ, PL, RO, RU, SI, SK, TJ, TT, UA, UZ, VN				
	RW: KE, MW, SD, SZ, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	AU 9477315	A1	19950410	AU 1994-77315	19940920
	EP 740682	A1	19961106	EP 1994-928167	19940920
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
	US 5665785	A	19970909	US 1995-534730	19950927
PRAI	US 1993-126316		19930924		
	WO 1994-US10633		19940920		
AB	Shaped microcellular structures having substantially noncellular skins are produced from reactive liquid polymer systems incorporating thermoplastic microspheres containing volatile materials such as low-b.p. halogenated or nonhalogenated organic materials. Use of thermoplastic microspheres encapsulating such volatile materials facilitates the removal of the shaped foamed structure from molds, eliminating the need for release agents. Various products based on this process, such as bathroom fixtures, bicycle and wheelchair tires, shoe soles, and automotive parts, are provided.				
ST	microcellular polymer integral skin; microencapsulated blowing agent; tire cellular plastic; shoe sole cellular plastic; automotive part cellular plastic				
IT	Epoxy resins, uses Phenolic resins, uses Polyesters, uses Polyisocyanurates Polyureas Siloxanes and Silicones, uses				

Urethane polymers, uses  
 RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
 (manufacture of cellular thermoplastics with integral skins from microencapsulated volatile organic compds. and)

IT Polyamides, uses  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (microspheres; in manufacture of cellular thermoplastics with integral skins)

IT Tires  
 (wheelchair; cellular thermoplastics with integral skins for)

IT Tires  
 (bicycle, cellular thermoplastics with integral skins for)

IT Spheres  
 (micro-, thermoplastic; in manufacture of cellular thermoplastics with integral skins)

IT Automobiles  
 (parts, cellular thermoplastics with integral skins for)

IT Urethane polymers, uses  
 RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
 (polyisocyanurate-, manufacture of cellular thermoplastics with integral skins from microencapsulated volatile organic compds. and)

IT Urethane polymers, uses  
 RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
 (polyurea-, manufacture of cellular thermoplastics with integral skins from microencapsulated volatile organic compds. and)

IT Polyisocyanurates  
 RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
 (polyurethane-, manufacture of cellular thermoplastics with integral skins from microencapsulated volatile organic compds. and)

IT Shoes  
 (soles, cellular thermoplastics with integral skins for)

IT Plastics  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (thermo-, microspheres; in manufacture of cellular thermoplastics with integral skins)

IT Polyesters, uses  
 RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
 (unsatd., manufacture of cellular thermoplastics with integral skins from microencapsulated volatile organic compds. and)

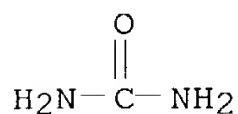
IT 118366-73-7, Expancel DU 551 169313-39-7, Expancel 820DU  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (in manufacture of cellular thermoplastics with integral skins)

IT 101-68-8D, polymers with polyols 110-63-4D, 1,4-Butanediol, polymers with polyisocyanates and polyols 9002-86-2, PVC **9011-05-6**, Urea-formaldehyde copolymer 24800-44-0D, Tripropylene glycol, polymers with polyisocyanates and polyols 25038-54-4, Polycaprolactam, uses 25068-38-6, DER 331 25190-06-1D, polymers with polyisocyanates and polyols 25265-71-8D, Dipropylene glycol, polymers with polyisocyanates and polyols 25791-96-2D, polymers with polyisocyanates **68003-11-2** 106392-12-5D, Ethylene oxide-propylene oxide block copolymer, triol derivs., polymers with diols and polyisocyanates 168682-62-0 169532-97-2  
 RL: PEP (Physical, engineering or chemical process); TEM (Technical or

engineered material use); PROC (Process); USES (Uses)  
 (manufacture of cellular thermoplastics with integral skins from  
 microencapsulated volatile organic compds. and)  
 IT 75-28-5, Isobutane 78-78-4, Isopentane  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (microencapsulated; in manufacture of cellular thermoplastics with integral  
 skins)  
 IT 9002-88-4, Polyethylene 9003-07-0, Polypropylene 9003-53-6,  
 Polystyrene 9003-56-9, ABS copolymer 9010-76-8, Acrylonitrile-  
 vinylidene chloride copolymer 38742-70-0, Expancel 091DU  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (microspheres; in manufacture of cellular thermoplastics with integral  
 skins)  
 IT **9011-05-6, Urea-formaldehyde copolymer 68003-11-2**  
 RL: PEP (Physical, engineering or chemical process); TEM (Technical or  
 engineered material use); PROC (Process); USES (Uses)  
 (manufacture of cellular thermoplastics with integral skins from  
 microencapsulated volatile organic compds. and)  
 RN 9011-05-6 HCAPLUS  
 CN Urea, polymer with formaldehyde (9CI) (CA INDEX NAME)

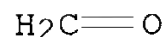
CM 1

CRN 57-13-6  
 CMF C H4 N2 O



CM 2

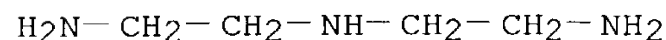
CRN 50-00-0  
 CMF C H2 O



RN 68003-11-2 HCAPLUS  
 CN 9,12-Octadecadienoic acid (9Z,12Z)-, dimer, polymer with  
 N-(2-aminoethyl)-1,2-ethanediamine, (chloromethyl)oxirane and  
 4,4'-(1-methylethylidene)bis[phenol] (9CI) (CA INDEX NAME)

CM 1

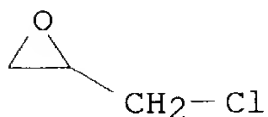
CRN 111-40-0  
 CMF C4 H13 N3



CM 2

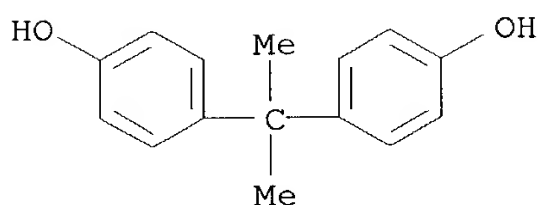


CRN 106-89-8  
CMF C3 H5 Cl O



CM 3

CRN 80-05-7  
CMF C15 H16 O2



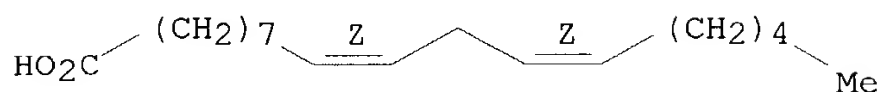
CM 4

CRN 6144-28-1  
CMF (C18 H32 O2)2  
CCI PMS

CM 5

CRN 60-33-3  
CMF C18 H32 O2

Double bond geometry as shown.



L31 ANSWER 7 OF 8 HCAPLUS COPYRIGHT 2004 ACS on STN  
AN 1993:256050 HCAPLUS  
DN 118:256050  
ED Entered STN: 26 Jun 1993  
TI Thermoplastic polymer compositions containing fatty acid esters as mold release agents  
PA Instytut Chemii Przemyslowej, Pol.; Scientific-Research Institute of Plastics  
SO Neth. Appl., 18 pp.  
CODEN: NAXXAN  
DT Patent  
LA Dutch  
IC ICM C08K005-12  
ICS C07C069-28; C07C069-90; C07C069-75; C07C069-80; C07C271-16;

C07C271-24; C07C271-28; C07D303-26  
 CC 37-6 (Plastics Manufacture and Processing)  
 Section cross-reference(s): 38

FAN.CNT 1

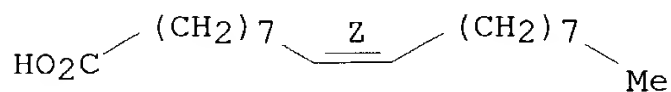
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	NL 9100873	A	19921216	NL 1991-873	19910521
PRAI	NL 1991-873		19910521		
AB	Esters prepared from fatty acids (e.g., stearic or octadecenoic acid) and epoxy resins, epoxy novolak resins, adducts of epoxy resins and cyclic dicarboxylic anhydrides or diisocyanates, etc., are added to thermoplastic resins, e.g., polycarbonates, polyamides, polyoxymethylenes, or polyoxyphenylenes, as mold release agents.				
ST	fatty ester mold release thermoplastic; epoxy ester mold release thermoplastic; stearic ester mold release thermoplastic; polycarbonate mold release; polyamide mold release; polyoxymethylene mold release; polyoxyphenylene mold release				
IT	Polyamides, miscellaneous Polycarbonates, miscellaneous Polyoxymethylenes, miscellaneous Polyoxyphenylenes RL: MSC (Miscellaneous) (mold release agents for, fatty acid esters as)				
IT	Molding apparatus for plastics and rubbers (release agents for, fatty acid esters as)				
IT	Fatty acids, esters RL: USES (Uses) (esters, with epoxy resins and derivs., mold release agents, for thermoplastics)				
IT	Epoxy resins, compounds RL: USES (Uses) (esters, with fatty acids, mold release agents, for thermoplastics)				
IT	Lubricants (mold-release, fatty acid esters, for thermoplastics)				
IT	25134-01-4, Poly(2,6-dimethyl-1,4-phenylene oxide) RL: USES (Uses) (mold release agents for, fatty acid esters as)				
IT	24936-68-3, miscellaneous 24938-67-8, Poly(2,6-dimethyl-1,4-phenylene oxide) 25038-54-4, Poly[imino(1-oxo-1,6-hexanediyl)], miscellaneous RL: MSC (Miscellaneous) (mold release agents for, fatty acid esters as)				
IT	9003-35-4D, glycidyl ethers, esters with fatty acids 25053-96-7D, glycidyl ethers, esters with fatty acids 25085-75-0D, glycidyl ethers, esters with fatty acids 59111-89-6 <b>59978-87-9</b> 123896-29-7 147545-82-2 147545-83-3 147545-84-4 147545-85-5 147545-86-6 147545-87-7 147545-89-9 <b>147554-75-4</b> 147554-76-5 147554-77-6 <b>148005-93-0</b> RL: USES (Uses) (mold release agents, for thermoplastics)				
IT	147554-78-7P <b>147554-79-8P</b> 147554-80-1P 147554-81-2P 147554-82-3P <b>147554-83-4P</b> <b>147966-73-2P</b> 148005-88-3P <b>148005-89-4P</b> 148005-90-7P <b>148005-91-8P</b> 148005-92-9P <b>148005-94-1P</b> <b>148005-95-2P</b> RL: PREP (Preparation) (preparation of, for improved mold release)				
IT	<b>59978-87-9</b> <b>147554-75-4</b> <b>148005-93-0</b> RL: USES (Uses) (mold release agents, for thermoplastics)				

RN 59978-87-9 HCAPLUS  
 CN Phenol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane,  
 (9Z)-9-octadecenoate (9CI) (CA INDEX NAME)

CM 1

CRN 112-80-1  
 CMF C18 H34 O2

Double bond geometry as shown.

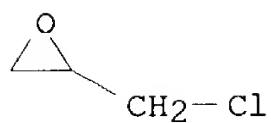


CM 2

CRN 25068-38-6  
 CMF (C15 H16 O2 . C3 H5 Cl O)x  
 CCI PMS

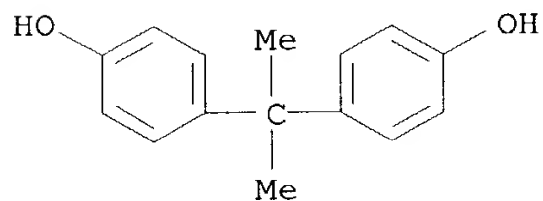
CM 3

CRN 106-89-8  
 CMF C3 H5 Cl O



CM 4

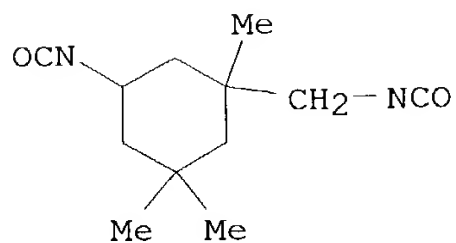
CRN 80-05-7  
 CMF C15 H16 O2



RN 147554-75-4 HCAPLUS  
 CN Phenol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane,  
 dioctadecanoate, polymer with 5-isocyanato-1-(isocyanatomethyl)-1,3,3-  
 trimethylcyclohexane (9CI) (CA INDEX NAME)

CM 1

CRN 4098-71-9  
 CMF C12 H18 N2 O2



CM 2

CRN 123896-29-7  
CMF C18 H36 O2 . 1/2 (C15 H16 O2 . C3 H5 Cl O)x

CM 3

CRN 57-11-4  
CMF C18 H36 O2

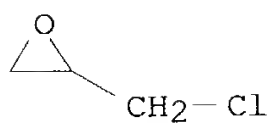
HO<sub>2</sub>C-(CH<sub>2</sub>)<sub>16</sub>-Me

CM 4

CRN 25068-38-6  
CMF (C15 H16 O2 . C3 H5 Cl O)x  
CCI PMS

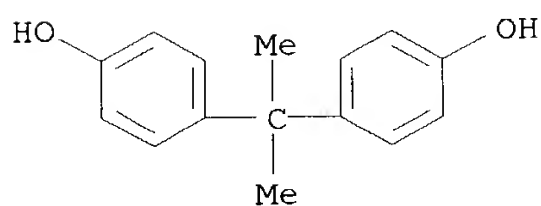
CM 5

CRN 106-89-8  
CMF C3 H5 Cl O



CM 6

CRN 80-05-7  
CMF C15 H16 O2



RN 148005-93-0 HCAPLUS  
CN Ethanol, 2,2'-[1,2-ethanediylbis(oxy)]bis-, polymer with

KATHLEEN FULLER EIC 1700 REMSEN 4B28 571/272-2505

(chloromethyl)oxirane, octadecanoate, polymer with 1,6-diisocyanatohexane  
(9CI) (CA INDEX NAME)

CM 1

CRN 822-06-0

CMF C8 H12 N2 O2

OCN-(CH<sub>2</sub>)<sub>6</sub>-NCO

CM 2

CRN 147545-88-8

CMF C18 H36 O2 . x (C6 H14 O4 . C3 H5 Cl O)x

CM 3

CRN 57-11-4

CMF C18 H36 O2

HO<sub>2</sub>C-(CH<sub>2</sub>)<sub>16</sub>-Me

CM 4

CRN 29223-58-3

CMF (C6 H14 O4 . C3 H5 Cl O)x

CCI PMS

CM 5

CRN 112-27-6

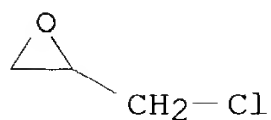
CMF C6 H14 O4

HO-CH<sub>2</sub>-CH<sub>2</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-OH

CM 6

CRN 106-89-8

CMF C3 H5 Cl O



IT 147554-79-8P 147554-83-4P 147966-73-2P  
148005-89-4P 148005-91-8P 148005-94-1P  
148005-95-2P

RL: PREP (Preparation)  
(preparation of, for improved mold release)

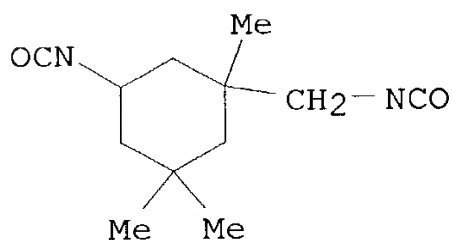
RN 147554-79-8 HCAPLUS

CN Carbonic acid, polymer with (chloromethyl)oxirane polymer with  
4,4'-(1-methylethylidene)bis[phenol] dioctadecanoate, 5-isocyanato-1-  
(isocyanatomethyl)-1,3,3-trimethylcyclohexane and 4,4'-(1-  
methylethylidene)bis[phenol] (9CI) (CA INDEX NAME)

CM 1

CRN 4098-71-9

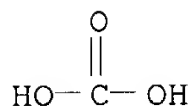
CMF C12 H18 N2 O2



CM 2

CRN 463-79-6

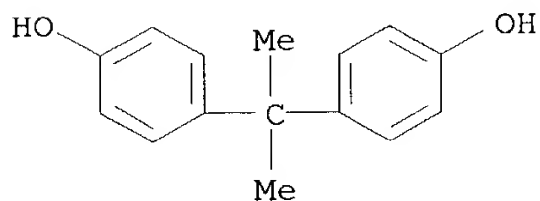
CMF C H2 O3



CM 3

CRN 80-05-7

CMF C15 H16 O2



CM 4

CRN 123896-29-7

CMF C18 H36 O2 . 1/2 (C15 H16 O2 . C3 H5 Cl O)x

CM 5

CRN 57-11-4

CMF C18 H36 O2

HO<sub>2</sub>C-(CH<sub>2</sub>)<sub>16</sub>-Me

CM 6

CRN 25068-38-6

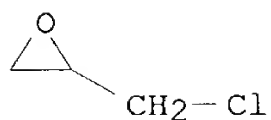
CMF (C15 H16 O2 . C3 H5 Cl O) x

CCI PMS

CM 7

CRN 106-89-8

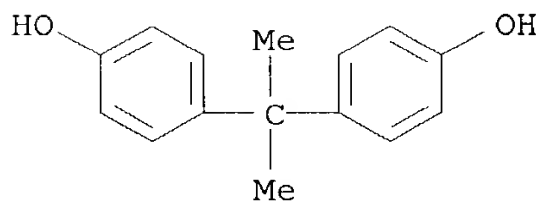
CMF C3 H5 Cl O



CM 8

CRN 80-05-7

CMF C15 H16 O2



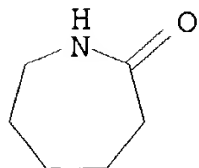
RN 147554-83-4 HCAPLUS

CN 2H-Azepin-2-one, hexahydro-, polymer with (chloromethyl)oxirane polymer with 4,4'-(1-methylethylidene)bis[phenol] (9Z)-9-octadecenoate (9CI) (CA INDEX NAME)

CM 1

CRN 105-60-2

CMF C6 H11 N O



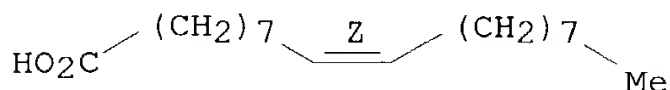
CM 2

CRN 59978-87-9  
CMF C18 H34 O2 . x (C15 H16 O2 . C3 H5 Cl O) x

CM 3

CRN 112-80-1  
CMF C18 H34 O2

Double bond geometry as shown.

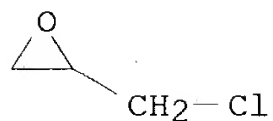


CM 4

CRN 25068-38-6  
CMF (C15 H16 O2 . C3 H5 Cl O) x  
CCI PMS

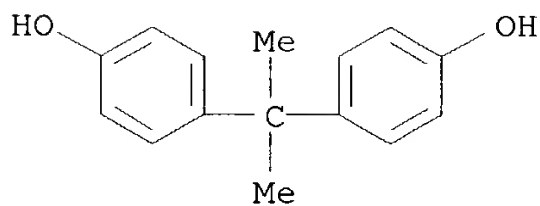
CM 5

CRN 106-89-8  
CMF C3 H5 Cl O



CM 6

CRN 80-05-7  
CMF C15 H16 O2

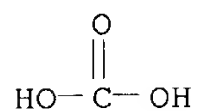


RN 147966-73-2 HCAPLUS  
CN Carbonic acid, polymer with 1,3-butadiene, (chloromethyl)oxirane polymer with hexahydro-1,3-isobenzofurandione butanedioate (9Z,12Z)-9,12-octadecadienoate, ethenylbenzene, 4,4'-(1-methylethylidene)bis[phenol] and 2-propenenitrile (9CI) (CA INDEX NAME)

CM 1

CRN 463-79-6  
CMF C H2 O3

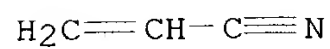




CM 2

CRN 107-13-1

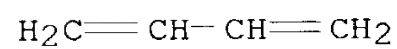
CMF C3 H3 N



CM 3

CRN 106-99-0

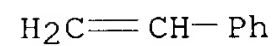
CMF C4 H6



CM 4

CRN 100-42-5

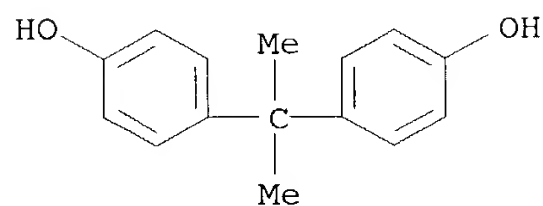
CMF C8 H8



CM 5

CRN 80-05-7

CMF C15 H16 O2



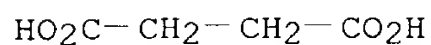
CM 6

CRN 147545-86-6

CMF C18 H32 O2 . x (C8 H10 O3 . C3 H5 Cl O)x . x C4 H6 O4

CM 7

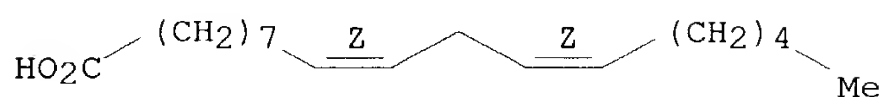
CRN 110-15-6  
CMF C4 H6 O4



CM 8

CRN 60-33-3  
CMF C18 H32 O2

Double bond geometry as shown.

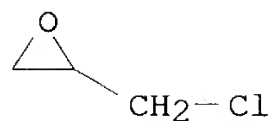


CM 9

CRN 31095-87-1  
CMF (C8 H10 O3 . C3 H5 Cl O) x  
CCI PMS

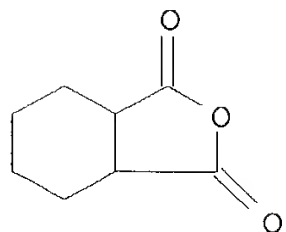
CM 10

CRN 106-89-8  
CMF C3 H5 Cl O



CM 11

CRN 85-42-7  
CMF C8 H10 O3

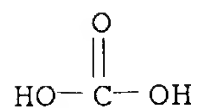


RN 148005-89-4 HCAPLUS  
CN Carbonic acid, polymer with (chloromethyl)oxirane polymer with  
1,6-hexanediol 4-cyclohexene-1,2-dicarboxylate (9Z)-9-octadecenoate, and  
4,4'-(1-methylethylidene)bis[phenol] (9CI) (CA INDEX NAME)

CM 1

CRN 463-79-6

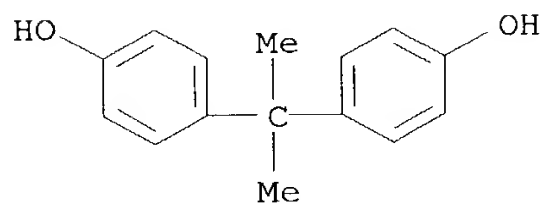
CMF C H2 O3



CM 2

CRN 80-05-7

CMF C15 H16 O2



CM 3

CRN 147545-83-3

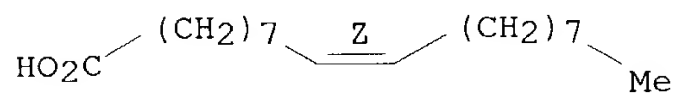
CMF C18 H34 O2 . x C8 H10 O4 . x (C6 H14 O2 . C3 H5 Cl O) x

CM 4

CRN 112-80-1

CMF C18 H34 O2

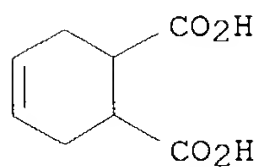
Double bond geometry as shown.



CM 5

CRN 88-98-2

CMF C8 H10 O4



CM 6

CRN 55653-34-4  
 CMF (C6 H14 O2 . C3 H5 Cl O)x  
 CCI PMS

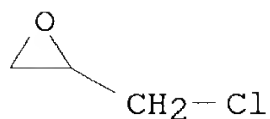
CM 7

CRN 629-11-8  
 CMF C6 H14 O2

HO--(CH<sub>2</sub>)<sub>6</sub>--OH

CM 8

CRN 106-89-8  
 CMF C3 H5 Cl O



RN 148005-91-8 HCAPLUS  
 CN Carbonic acid, polymer with (chloromethyl)oxirane polymer with  
 2,2'-[1,2-ethanediylbis(oxy)]bis[ethanol] octadecanoate,  
 1,6-diisocyanatohexane and 4,4'-(1-methylethylidene)bis[phenol] (9CI) (CA  
 INDEX NAME)

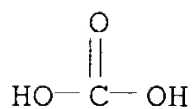
CM 1

CRN 822-06-0  
 CMF C8 H12 N2 O2

OCN--(CH<sub>2</sub>)<sub>6</sub>--NCO

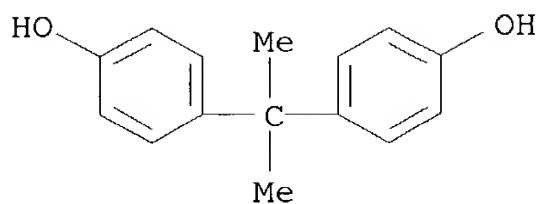
CM 2

CRN 463-79-6  
 CMF C H2 O3



CM 3

CRN 80-05-7  
 CMF C15 H16 O2



CM 4

CRN 147545-88-8

CMF C18 H36 O2 . x (C6 H14 O4 . C3 H5 Cl O)x

CM 5

CRN 57-11-4

CMF C18 H36 O2



CM 6

CRN 29223-58-3

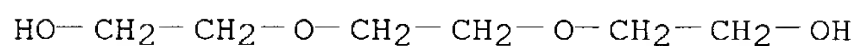
CMF (C6 H14 O4 . C3 H5 Cl O)x

CCI PMS

CM 7

CRN 112-27-6

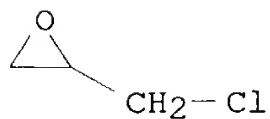
CMF C6 H14 O4



CM 8

CRN 106-89-8

CMF C3 H5 Cl O

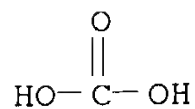


RN 148005-94-1 HCAPLUS

CN Carbonic acid, polymer with (chloromethyl)oxirane polymer with 4,4'-methylenebis[phenol] octadecanoate (9Z)-9-octadecenoate, and 4,4'-(1-methylethylidene)bis[phenol] (9CI) (CA INDEX NAME)

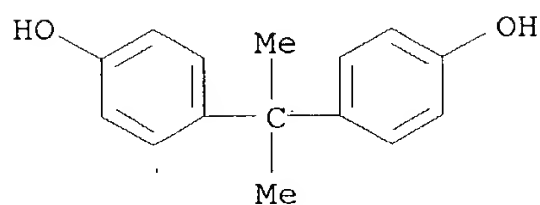
CM 1

CRN 463-79-6  
CMF C H2 O3



CM 2

CRN 80-05-7  
CMF C15 H16 O2



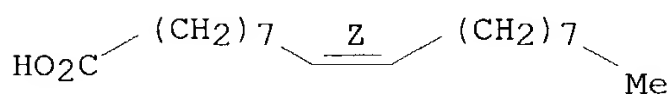
CM 3

CRN 147545-82-2  
CMF C18 H36 O2 . x C18 H34 O2 . x (C13 H12 O2 . C3 H5 Cl O)x

CM 4

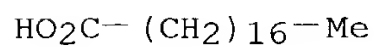
CRN 112-80-1  
CMF C18 H34 O2

Double bond geometry as shown.



CM 5

CRN 57-11-4  
CMF C18 H36 O2

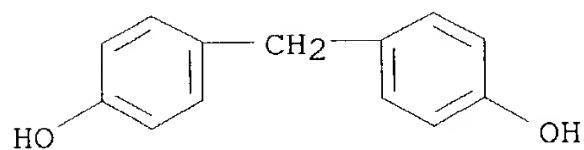


CM 6

CRN 42423-25-6  
CMF (C13 H12 O2 . C3 H5 Cl O)x  
CCI PMS

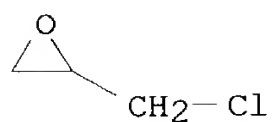
CM 7

CRN 620-92-8  
CMF C13 H12 O2



CM 8

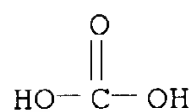
CRN 106-89-8  
CMF C3 H5 Cl O



RN 148005-95-2 HCAPLUS  
CN Carbonic acid, polymer with 1,3-isobenzofurandione polymer with (chloromethyl)oxirane (9Z)-9-octadecenoate, and 4,4'-(1-methylethylidene)bis[phenol] (9CI) (CA INDEX NAME)

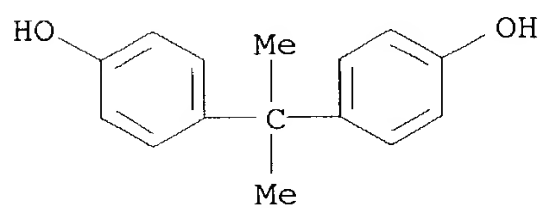
CM 1

CRN 463-79-6  
CMF C H2 O3



CM 2

CRN 80-05-7  
CMF C15 H16 O2



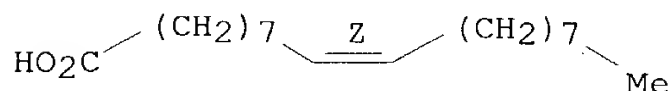
CM 3

CRN 147545-87-7  
CMF C18 H34 O2 . x (C8 H4 O3 . C3 H5 Cl O)x

CM 4

CRN 112-80-1  
CMF C18 H34 O2

Double bond geometry as shown.

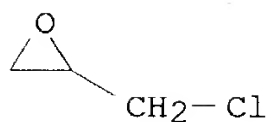


CM 5

CRN 25684-71-3  
CMF (C8 H4 O3 . C3 H5 Cl O)x  
CCI PMS

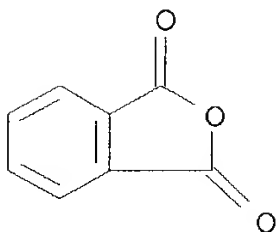
CM 6

CRN 106-89-8  
CMF C3 H5 Cl O



CM 7

CRN 85-44-9  
CMF C8 H4 O3



L31 ANSWER 8 OF 8 HCAPLUS COPYRIGHT 2004 ACS on STN  
AN 1993:60785 HCAPLUS  
DN 118:60785  
ED Entered STN: 16 Feb 1993  
TI Inorg. compound-covered organic polymer microcapsules as resin modifiers  
IN Isobe, Yasushi  
PA Toa Gosei Chemical Industry Co., Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 17 pp.  
CODEN: JKXXAF



DT Patent  
 LA Japanese  
 IC ICM C08L021-00  
 ICS C08F291-02; C08J003-12; C08K009-02; C08L023-00; C08L025-04;  
 C08L033-06; C09D005-00

CC 37-6 (Plastics Manufacture and Processing)  
 Section cross-reference(s): 39

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 04175351	A2	19920623	JP 1990-234049	19900904
	JP 2844886	B2	19990113		
PRAI	JP 1989-228346		19890905		
	JP 1989-269838		19891017		
	JP 1990-45162		19900226		
	JP 1990-171191		19900628		

AB Inorg. compound (from inorg. sols)-coated organic polymer microcapsules are prepared, show good dispersibility in resins, easy removal of soluble ions, and easy surface modification (e.g. by vinylsilanes), and are used in adhesives, coatings and semiconductor sealants. Thus, an Epikote 828 composition containing 40 phr Versamid 125 (hardener) and 30 phr modifier particles

which comprise 30% SiO<sub>2</sub> coatings and 70% acrylonitrile-3-methacryloxypropyltrimethoxysilane-styrene graft copolymer cores showed shear strength 260 kg/cm<sup>2</sup>, adhesion (to Al plate, 23°, 20 mm/min) 10.0 kg/cm, and crack test (Jis C 2105-1979, hot-cold cycles) 5 cycles; vs. 185, <0.2 and 1, resp. without the modifier.

ST epoxy resin adhesion improver; mech strength improver silica coated microcapsule; styrene graft polymer inorg microcapsule; dispersibility inorg microcapsule

IT Adhesives

(modifiers for, inorg. compound-coated acrylic (graft) polymer microcapsules as manufacture of)

IT Coating materials

Potting compositions

(modifiers for, inorg. compound-coated acrylic (graft) polymer microcapsules as, manufacture of)

IT Rubber, synthetic

RL: USES (Uses)

(acrylic, inorg. compound-coated, microcapsules of, as adhesion and mech. strength improvers)

IT Capsules

(micro-, inorg. compound-coated acrylic (graft) polymers, manufacture of, as adhesion and mech. strength improvers)

IT **9011-05-6**, Formaldehyde-urea copolymer

RL: USES (Uses)

(acrylic styrene copolymer blends, inorg. compound-coated, microcapsules of, as adhesion and mech. strength modifiers)

IT 25101-31-9, Triethylene glycol dimethacrylate homopolymer

**26658-91-3** 51512-27-7

RL: USES (Uses)

(adhesion and mech. strength improvers for, silica-coated styrene graft polymer microcapsules as, manufacture of)

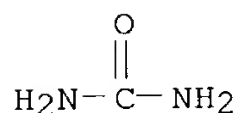
IT 1344-28-1, Alumina, uses 7631-86-9, Snowtex, uses

RL: TEM (Technical or engineered material use); USES (Uses)

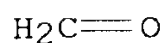
(coatings, on organic polymers, as microcapsules, dispersible in resins, as adhesion and mech. strength improvers)

IT 919-30-2, 3-Aminopropyl triethoxysilane 2530-83-8 2768-02-7,

Vinyltrimethoxysilane 14513-34-9  
 RL: USES (Uses)  
 (coupler, on inorg. compound-coated acrylic (graft) polymers,  
 microcapsules of, as adhesion and mech. strength improvers)  
 IT 145584-21-0 145584-22-1 145584-23-2 145584-35-6  
 RL: USES (Uses)  
 (inorg. compound-coated, microcapsules of, as adhesion and mech. strength  
 improvers)  
 IT 26713-18-8, Acrylic acid-ethylene-vinyl acetate copolymer 145152-26-7  
 145584-24-3 145584-25-4 145584-26-5 145584-27-6 145584-28-7  
 145584-29-8 145584-30-1 145584-31-2 145584-32-3 145584-33-4  
 145584-34-5 145584-36-7 145608-50-0 146757-73-5  
 RL: USES (Uses)  
 (rubber, inorg. compound-coated, microcapsules of, as adhesion and mech.  
 strength improvers)  
 IT **9011-05-6**, Formaldehyde-urea copolymer  
 RL: USES (Uses)  
 (acrylic styrene copolymer blends, inorg. compound-coated, microcapsules  
 of, as adhesion and mech. strength modifiers)  
 RN 9011-05-6 HCAPLUS  
 CN Urea, polymer with formaldehyde (9CI) (CA INDEX NAME)  
  
 CM 1  
  
 CRN 57-13-6  
 CMF C H4 N2 O



CM 2  
  
 CRN 50-00-0  
 CMF C H2 O



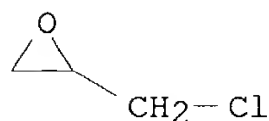
IT **26658-91-3**  
 RL: USES (Uses)  
 (adhesion and mech. strength improvers for, silica-coated styrene graft  
 polymer microcapsules as, manufacture of)  
 RN 26658-91-3 HCAPLUS  
 CN 9,12-Octadecadienoic acid (9Z,12Z)-, polymer with N-(2-aminoethyl)-1,2-  
 ethanediamine, (chloromethyl)oxirane and 4,4'-(1-  
 methylethylidene)bis[phenol] (9CI) (CA INDEX NAME)  
  
 CM 1  
  
 CRN 111-40-0  
 CMF C4 H13 N3



CM 2

CRN 106-89-8

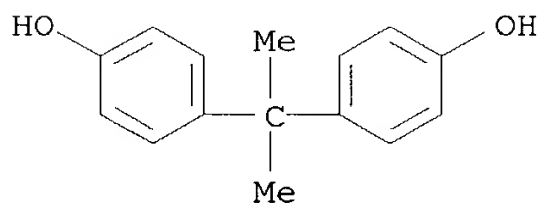
CMF C3 H5 Cl O



CM 3

CRN 80-05-7

CMF C15 H16 O2

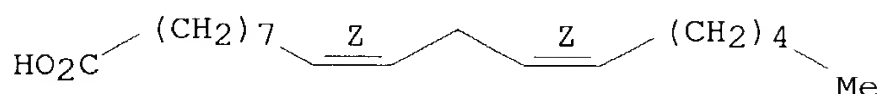


CM 4

CRN 60-33-3

CMF C18 H32 O2

Double bond geometry as shown.



*Tept search with  
Polymer class terms*

=> => D QUE L56

L33	65294	SEA	FILE=REGISTRY	ABB=ON	POLYURETHANE/PCT
L34	43027	SEA	FILE=REGISTRY	ABB=ON	EP/PCT
L35	287662	SEA	FILE=REGISTRY	ABB=ON	PACR/PCT
L36	173890	SEA	FILE=REGISTRY	ABB=ON	PES/PCT
L37	3097	SEA	FILE=REGISTRY	ABB=ON	L34 AND L35 AND L36
L38	1533	SEA	FILE=HCAPLUS	ABB=ON	L37
L39	37502	SEA	FILE=HCAPLUS	ABB=ON	L33
L40	289	SEA	FILE=HCAPLUS	ABB=ON	L38 AND L39
L41	78	SEA	FILE=HCAPLUS	ABB=ON	L40 AND (H2O OR WATER? OR AQ OR AQUEOUS?)
L42	7	SEA	FILE=HCAPLUS	ABB=ON	L41 AND PH
L43	29	SEA	FILE=HCAPLUS	ABB=ON	L41 AND CROSSLINK?
L44	34	SEA	FILE=HCAPLUS	ABB=ON	L42 OR L43

L45 12032 SEA FILE=HCAPLUS ABB=ON L39 AND (H2O OR WATER? OR AQ OR AQUEOUS?)  
 L46 658 SEA FILE=HCAPLUS ABB=ON L45 AND (?EPOX? OR ?OXIRAN?) AND ?ACRYL?  
 L47 318 SEA FILE=HCAPLUS ABB=ON L46 AND POLYESTER?  
 L48 115 SEA FILE=HCAPLUS ABB=ON L47 AND CROSSLINK?  
 L50 13819 SEA FILE=HCAPLUS ABB=ON (AQ OR H2O OR AQUEOUS OR WATER?) (5A) (? URETHANE?)  
 L51 44 SEA FILE=HCAPLUS ABB=ON L48 AND L50  
 L52 41 SEA FILE=HCAPLUS ABB=ON L51 AND (FILM? OR COATING?)/SC,SX,AB,B I  
 L53 28 SEA FILE=HCAPLUS ABB=ON L44 AND (FILM? OR COATING?)/SC,SX,AB,B I  
 L54 330 SEA FILE=HCAPLUS ABB=ON L45 AND (?EPOX? OR ?OXIRAN?) (4A) ?ACRYL ?  
 L55 18 SEA FILE=HCAPLUS ABB=ON L52 AND L54  
 L56 43 SEA FILE=HCAPLUS ABB=ON L53 OR L55

=> D L56 1-43 BIB ABS IND HITSTR

L56 ANSWER 1 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2003:460364 HCAPLUS

DN 139:37598

TI Coated **films** having good processability and fine appearances, their lamination, and molding process

IN Haruta, Naoya; Tomiyama, Takeshi; Kondo, Kazuo; Akagi, Takeshi; Isozaki, Satoru

PA Kansai Paint Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 27 pp.  
CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2003170538	A2	20030617	JP 2001-370692	20011204
PRAI	JP 2001-370692		20011204		

AB The coated **film** comprises a laminate of  $\geq 2$  plastic **films** whose outermost layer **film** (I) is made from a **crosslinkable** resin **coating** (A) and the lowermost **film** (II) is made from a thermoplastic resin (B), is substantially free from tackiness, and shows tensile elongation at break (specimen length 30 mm, width 10 mm, thickness 0.05 mm, temperature  $-10^{\circ}$ , tensile speed 200 m/min) 50-1000%. The coated **film** is hot press bonded to a plastic substrate on the **film** (II) layer. In another alternative, the coated **film** is laminated by molding a coated **film** and a plastic substrates raw materials in such a way that the **film** (II) layer is provided on the surface of the resulting plastic substrate. Thus, applying an isocyanate-curable **acrylic** resin **coating** (Retan PG 80 Metallic) on a poly(ethylene terephthalate) release **film**, drying at  $80^{\circ}$ , applying Retan PQ Quartz Z (clear coat), drying, and removing the release **film** gave a metallic color **film** (equivalent to the **film** I), which was further coated on the metallic **coating** surface with a **water**-based **urethane** resin emulsion (Superflex 410), and dried at  $100^{\circ}$  to give a urethane **film** (equivalent to the **film** II) showing tensile elongation at break

170°. The coated **film** was placed on the inner face of an injection molding die for automotive bumper with the clear layer being in contact with the inner face, then a molten polypropylene was cast on the **film** (II) layer at .apprx.230°, cooled, and demolded to give a polypropylene molding with good appearance. The molding showed good resistances to **water** and gasoline.

- IC ICM B32B027-08
- ICS C08G018-32; C08L063-00; C08L075-04
- CC 38-3 (Plastics Fabrication and Uses)
- ST coated plastic **film** manuf lamination; polyurethane **film**  
coated manuf lamination
- IT Linseed oil  
Soybean oil  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(-derived **polyesters**; coated **films** having good processability and fine appearances and their lamination and molding process with)
- IT **Acrylic** polymers, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(acid **epoxy-crosslinkable**, clear **film** of; coated **films** having good processability and fine appearances and their lamination and molding process with)
- IT **Epoxy** resins, uses  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(clear **film** of; coated **films** having good processability and fine appearances and their lamination and molding process with)
- IT Laminated plastic **films**  
(coated **films** having good processability and fine appearances and their lamination and molding process)
- IT Laminated plastics, uses  
Molded plastics, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(coated **films** having good processability and fine appearances and their lamination and molding process)
- IT **Acrylic** polymers, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(isocyanate-**crosslinkable**, **coating**; coated **films** having good processability and fine appearances and their lamination and molding process)
- IT **Acrylic** polymers, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(melamine-**crosslinkable**, clear **film** of; coated **films** having good processability and fine appearances and their lamination and molding process with)
- IT Polyurethanes, uses  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(**polyester-**, **diacrylates**, **acrylic-crosslinked**, clear **film**; coated **films** having good processability and fine appearances and their lamination and molding process with)
- IT **Polyurethanes**, uses  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(**polyester**-polyoxyalkylene-, **water**-based emulsion,

- for **film**; coated **films** having good processability and fine appearances and their lamination and molding process)
- IT Polyoxyalkylenes, uses  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (reaction products with **polyester** polyols, alcs., polyoxyalkylene polyols, and IPDI, **water**-based **urethane** resin emulsion, for **film**; coated **films** having good processability and fine appearances and their lamination and molding process)
- IT **Polyurethanes**, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (**water**-based **coating**; coated **films** having good processability and fine appearances and their lamination and molding process)
- IT 253328-06-2, Retan PG 80 Metallic  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (Metallic and Quartz Z, **film** of; coated **films** having good processability and fine appearances and their lamination and molding process)
- IT 148209-68-1P, **Acrylic** acid-butyl **methacrylate**-glycidyl **methacrylate**-methyl **methacrylate**-styrene copolymer  
 543681-66-9P 543681-68-1P, Butyl **methacrylate**-3,4-**epoxycyclohexyl methacrylate**-methyl **methacrylate** copolymer  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (clear **film** of; coated **films** having good processability and fine appearances and their lamination and molding process with)
- IT 256531-10-9, Soflex 1630 Clear 388568-48-7, Isobutyl **methacrylate**-( $\gamma$ - **methacryloxypropyl**)trimethoxysilane-methyl **methacrylate**-styrene copolymer  
 388622-51-3, KINO 400 Clear  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (clear **film** of; coated **films** having good processability and fine appearances and their lamination and molding process with)
- IT 185946-77-4P, Butyl **acrylate**-2-hydroxyethyl **acrylate**-hexamethylene diisocyanate-methyl **methacrylate**-phthalic anhydride-neopentyl glycol copolymer  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (clear **film**; coated **films** having good processability and fine appearances and their lamination and molding process with)
- IT 107-15-3DP, Ethylenediamine, reaction products with polycarbonate polyols, alcs., and dimethylolpropionic acid, triethylamine salt 4098-71-9DP, IPDI, polyols, reaction products with **polyester** polyols, alcs., and polyoxyalkylene polyols 4767-03-7DP, Dimethylolpropionic acid, reaction products with polycarbonate polyols, alcs., and ethylenediamine, triethylamine salt 543681-70-5P 543681-71-6P 543697-62-7P 543697-63-8P 543701-01-5P  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (coated **films** having good processability and fine appearances and their lamination and molding process)
- IT 56-81-5DP, Glycerin, reaction products with linseed oil, soybean oil,

- pentaerythritol, and phthalic anhydride, triethylamine salt 85-44-9DP,  
Phthalic anhydride, reaction products with linseed oil, soybean oil,  
glycerin, and pentaerythritol, triethylamine salt 115-77-5DP,  
Pentaerythritol, reaction products with linseed oil, soybean oil,  
glycerin, and phthalic anhydride, triethylamine salt 121-44-8DP,  
Triethylamine, salt, with linseed oil, soybean oil, glycerin,  
pentaerythritol, and phthalic anhydride  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material  
use); PREP (Preparation); USES (Uses)  
(coated **films** having good processability and fine appearances  
and their lamination and molding process with)
- IT 9003-07-0, Polypropylene  
RL: TEM (Technical or engineered material use); USES (Uses)  
(coated **films** having good processability and fine appearances  
and their lamination and molding process with)
- IT 157351-99-0, Superflex 410  
RL: TEM (Technical or engineered material use); USES (Uses)  
(**coating**; coated **films** having good processability  
and fine appearances and their lamination and molding process)
- IT 111145-87-0P, Acric 2000 Metallic  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material  
use); PREP (Preparation); USES (Uses)  
(color **coating**; coated **films** having good  
processability and fine appearances and their lamination and molding  
process with)
- IT 541501-41-1P 541502-47-0P, Denacol EX 521-Superflex 410 copolymer  
543681-69-2P 543697-61-6P  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material  
use); PREP (Preparation); USES (Uses)  
(color **film**; coated **films** having good  
processability and fine appearances and their lamination and molding  
process)
- IT 543681-67-0P, **Acrylic** acid-adipic acid dihydrarzide-butyl  
**acrylate**-2-ethylhexyl **acrylate**-methyl  
**methacrylate**-styrene copolymer  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material  
use); PREP (Preparation); USES (Uses)  
(**crosslinked** clear **film**; coated **films**  
having good processability and fine appearances and their lamination  
and molding process with)
- IT 31305-91-6, Denacol EX 314 58782-18-6, Denacol EX 850  
RL: TEM (Technical or engineered material use); USES (Uses)  
(hardener for **water**-based **urethane** resin emulsion,  
color **film** from; coated **films** having good  
processability and fine appearances and their lamination and molding  
process)
- IT 388622-55-7P  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material  
use); PREP (Preparation); USES (Uses)  
(metallic color **film** of; coated **films** having good  
processability and fine appearances and their lamination and molding  
process)
- IT 629-11-8DP, 1,6-Hexanediol, polycarbonate polyol, reaction products with  
trimethylolpropane, 1,4-butanediol, IPDI, dimethylolpropionic acid, and  
ethylenediamine, triethylamine salt  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material  
use); PREP (Preparation); USES (Uses)  
(**water**-based emulsion, for **film**; coated

**films** having good processability and fine appearances and their lamination and molding process)

IT 77-99-6DP, Trimethylolpropane, reaction products with **polyester** polyols, alcs., polyoxyalkylene polyols, and IPDI 124-04-9DP, Adipic acid, reaction products with alcs., polyoxyalkylene polyols, and IPDI 9003-11-6DP, Ethylene oxide-propylene oxide copolymer, polyols, reaction products with **polyester** polyols, alcs., polyethylene glycol, and IPDI 25265-75-2DP, Butanediol, reaction products with acids, alcs., polyoxyalkylene polyols, and IPDI 25322-68-3DP, Polyethylene glycol, reaction products with **polyester** polyols, alcs., polyoxyalkylene polyols, and IPDI

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(**water**-based **urethane** resin emulsion, for **film**; coated **films** having good processability and fine appearances and their lamination and molding process)

IT 185946-77-4P, Butyl **acrylate**-2-hydroxyethyl **acrylate**-hexamethylene diisocyanate-methyl **methacrylate**-phthalic anhydride-neopentyl glycol copolymer

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(clear **film**; coated **films** having good processability and fine appearances and their lamination and molding process with)

RN 185946-77-4 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl 2-propenoate, 1,6-diisocyanatohexane, 2,2-dimethyl-1,3-propanediol, 2-hydroxyethyl 2-propenoate and 1,3-isobenzofurandione (9CI) (CA INDEX NAME)

CM 1

CRN 822-06-0

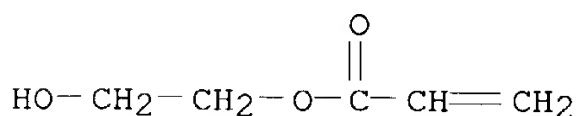
CMF C8 H12 N2 O2

OCN-(CH<sub>2</sub>)<sub>6</sub>-NCO

CM 2

CRN 818-61-1

CMF C5 H8 O3

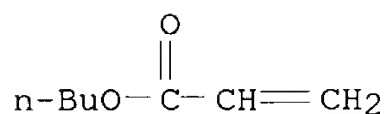


CM 3

CRN 141-32-2

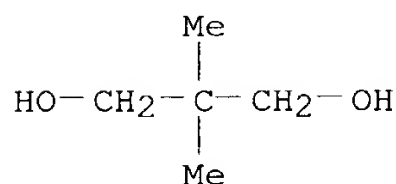
CMF C7 H12 O2





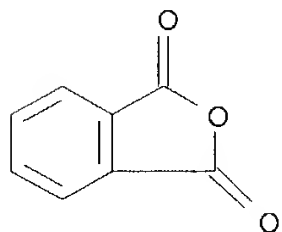
CM 4

CRN 126-30-7  
CMF C5 H12 O2



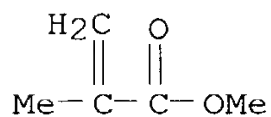
CM 5

CRN 85-44-9  
CMF C8 H4 O3



CM 6

CRN 80-62-6  
CMF C5 H8 O2



L56 ANSWER 2 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN  
AN 2003:434629 HCAPLUS  
DN 139:8273  
TI **Water**-thinned **crosslinkable** printing ink compositions  
containing polyurethane-polyurea and **epoxy-polyester-**  
**acrylic** polymers for printing on polymer **films**  
IN Arcurio, Ralph; Czarnecki, Richard; Lucci, Sam; Simoni-Truncellito,  
Jeannette  
PA Sun Chemical Corporation, USA  
SO PCT Int. Appl., 32 pp.  
CODEN: PIXXD2

*applicants*

DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003046039	A1	20030605	WO 2001-US46120	20011128

W: BR, CA  
 RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR

PRAI WO 2001-US46120 20011128

AB The composition with pH >7 comprises (A) a **water**-dispersible **polyurethane**-polyurea prepared from a urethane prepolymer with 8% unreacted -NCO and carboxylic groups (obtained by reacting a diisocyanate and a diol in NCO/OH ratio 1-2) and 110-200% diamine, wherein the polyurethane-polyurea contains terminal amine groups and -CO<sub>2</sub>-A<sup>+</sup> group (A<sup>+</sup> = onium ion of ammonia or volatile amine); (B) a **water** dispersible **epoxy-polyester-acrylic** polymer having reactive keto groups and ethylenic unstaruation; and (C) **water**.

IC ICM C08G018-08  
 ICS C08G018-12

CC 42-12 (Coatings, Inks, and Related Products)

ST polyurethane polyurea **crosslinkable** printing ink; **epoxy polyester acrylic** polymer **crosslinkable** ink; polyethylene film **water** thinned printing ink

IT **Polyesters**, uses  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (acrylic-epoxy, unsatd., reaction products with amine-terminated **polyurethane**-polyureas; **water** -thinned **crosslinkable** printing ink compns. containing polyurethane-polyurea and **epoxy-polyester-acrylic** polymers for printing on polymer **films**)

IT Polyurethanes, uses  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (acrylic-epoxy-polyester -polyoxyalkylene-, polyurea-; **water**-thinned **crosslinkable** printing ink compns. containing polyurethane-polyurea and **epoxy-polyester-acrylic** polymers for printing on polymer **films**)

IT Polyoxyalkylenes, uses  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (acrylic-epoxy-polyester- **polyurethane**-, polyurea-; **water**-thinned **crosslinkable** printing ink compns. containing polyurethane-polyurea and **epoxy-polyester-acrylic** polymers for printing on polymer **films**)

IT **Polyesters**, uses  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (acrylic-epoxy-polyoxyalkylene-**polyurethane** -, polyurea-; **water**-thinned **crosslinkable** printing ink compns. containing polyurethane-polyurea and **epoxy-polyester-acrylic** polymers for printing on polymer **films**)

IT **Epoxy** resins, uses

- RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (**acrylic-polyester-**, unsatd., reaction products with amine-terminated **polyurethane-polyureas**; **water**-thinned **crosslinkable** printing ink compns. containing polyurethane-polyurea and **epoxy-polyester-acrylic** polymers for printing on polymer **films**)
- IT Polyurethanes, uses  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (**acrylic-polyester-polyoxyalkylene-polyurea-**, **epoxy-**; **water**-thinned **crosslinkable** printing ink compns. containing polyurethane-polyurea and **epoxy-polyester-acrylic** polymers for printing on polymer **films**)
- IT Polyureas  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (**acrylic-polyester-polyoxyalkylene-polyurethane-**, **epoxy-**; **water**-thinned **crosslinkable** printing ink compns. containing polyurethane-polyurea and **epoxy-polyester-acrylic** polymers for printing on polymer **films**)
- IT **Epoxy** resins, uses  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (**acrylic-polyester-polyoxyalkylene-polyurethane-**, polyurea-; **water**-thinned **crosslinkable** printing ink compns. containing polyurethane-polyurea and **epoxy-polyester-acrylic** polymers for printing on polymer **films**)
- IT Polyoxyalkylenes, uses  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (**acrylic-polyester-polyurea-polyurethane-**, **epoxy-**; **water**-thinned **crosslinkable** printing ink compns. containing polyurethane-polyurea and **epoxy-polyester-acrylic** polymers for printing on polymer **films**)
- IT **Polyesters**, uses  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (**acrylic-polyoxyalkylene-polyurea-polyurethane-**, **epoxy-**; **water**-thinned **crosslinkable** printing ink compns. containing polyurethane-polyurea and **epoxy-polyester-acrylic** polymers for printing on polymer **films**)
- IT Polycarbonates, miscellaneous  
 RL: MSC (Miscellaneous)  
 (**films**; **water**-thinned **crosslinkable** printing ink compns. containing polyurethane-polyurea and **epoxy-polyester-acrylic** polymers for printing on polymer **films**)
- IT Polyurethanes, uses  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (polyoxyalkylene-polyurea-, amine-terminated, reaction products with keto-containing **epoxy-polyester-acrylic**

polymers; **water**-thinned **crosslinkable** printing ink compns. containing polyurethane-polyurea and **epoxy-polyester-acrylic** polymers for printing on polymer films)

IT Polyureas

RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (polyoxyalkylene-polyurethane-, amine-terminated, reaction products with keto-containing **epoxy-polyester-acrylic** polymers; **water**-thinned **crosslinkable** printing ink compns. containing polyurethane-polyurea and **epoxy-polyester-acrylic** polymers for printing on polymer films)

IT Inks

(printing; **water**-thinned **crosslinkable** printing ink compns. containing polyurethane-polyurea and **epoxy-polyester-acrylic** polymers for printing on polymer films)

IT Inks

(**water**-thinned; **water**-thinned **crosslinkable** printing ink compns. containing polyurethane-polyurea and **epoxy-polyester-acrylic** polymers for printing on polymer films)

IT 9002-88-4, Polyethylene 9003-07-0, Polypropylene 9004-35-7, Cellulose acetate 9004-36-8, Cellulose acetate butyrate

RL: MSC (Miscellaneous)

(films; **water**-thinned **crosslinkable** printing ink compns. containing polyurethane-polyurea and **epoxy-polyester-acrylic** polymers for printing on polymer films)

IT 83713-01-3DP, Jeffamine M 1000, reaction products with **polyurethane**-polyureas 536745-07-0DP, reaction products with amine-terminated **polyurethane**-polyureas **536745-09-2DP**, amine-terminated, reaction products with keto-containing **epoxy-polyester-acrylic** polymers

RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (**water**-thinned **crosslinkable** printing ink compns. containing polyurethane-polyurea and **epoxy-polyester-acrylic** polymers for printing on polymer films)

IT 25610-19-9, Polyethylene phthalate

RL: MSC (Miscellaneous)

(**water**-thinned **crosslinkable** printing ink compns. containing polyurethane-polyurea and **epoxy-polyester-acrylic** polymers for printing on polymer films)

IT **536745-09-2DP**, amine-terminated, reaction products, with keto-containing **epoxy-polyester-acrylic** polymers

RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (**water**-thinned **crosslinkable** printing ink compns. containing polyurethane-polyurea and **epoxy-polyester-acrylic** polymers for printing on polymer films)

RN 536745-09-2 HCAPLUS

CN Propanoic acid, 3-hydroxy-2-(hydroxymethyl)-2-methyl-, polymer with 1,3-bis(1-isocyanato-1-methylethyl)benzene, hydrazine,  $\alpha$ -hydro- $\omega$ -hydroxypoly(oxy-1,4-butanediyl) and 2-methyl-1,3-propanediol, ammonium salt (9CI) (CA INDEX NAME)

*Polymer in claim 15.*

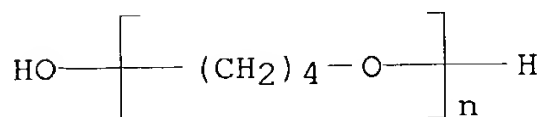
CM 1

CRN 536745-08-1  
CMF (C14 H16 N2 O2 . C5 H10 O4 . C4 H10 O2 . (C4 H8 O)n H2 O . H4 N2)x  
CCI PMS

CM 2

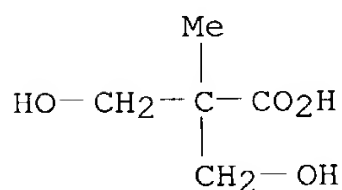
CRN 25190-06-1  
CMF (C4 H8 O)n H2 O  
CCI PMS

*Ita*



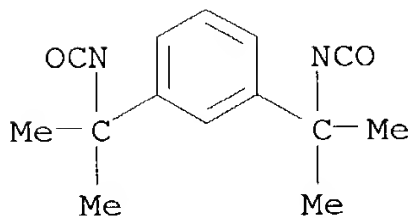
CM 3

CRN 4767-03-7  
CMF C5 H10 O4



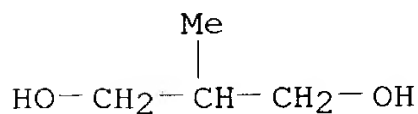
CM 4

CRN 2778-42-9  
CMF C14 H16 N2 O2



CM 5

CRN 2163-42-0  
CMF C4 H10 O2



CM 6

CRN 302-01-2

CMF H4 N2

H<sub>2</sub>N-NH<sub>2</sub>

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L56 ANSWER 3 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN  
AN 2003:156483 HCAPLUS  
DN 138:369545  
TI Modification of **aqueous** acrylic-polyurethane via epoxy resin  
postcrosslinking  
AU Shi, Yuanchang; Wu, Youshi; Zhu, Zhiqian  
CS College of Materials Science and Engineering, Shandong University, Jinan,  
250061, Peop. Rep. China  
SO Journal of Applied Polymer Science (2003), 88(2), 470-475  
CODEN: JAPNAB; ISSN: 0021-8995  
PB John Wiley & Sons, Inc.  
DT Journal  
LA English  
AB An epoxy resin (E-51)-modified acrylic-polyurethane emulsion with  
triethylenetetramine (TETA) serving as the postcrosslinking agent was  
synthesized. The curing reaction between E-51 and the curing agent TETA  
during the **film**-forming course was monitored and identified  
using an IR spectrophotometer. The stabilities of the single-pack  
emulsion during the polymerization course as well as the storage stage were  
investigated. The effect of the epoxy resin was studied in terms of the  
dispersion size of the emulsion, the mech. properties, as well as the  
swell in **water** and toluene of the cast **film**. The  
emulsion was stable when the epoxy content was below 20% based on the mass  
of the polyacrylate in the system. The tensile strength and the modulus  
and the **water** and toluene resistance were enhanced with an  
increase of the epoxy resin. In contrast, the elongation at break  
decreased.  
CC 37-3 (Plastics Manufacture and Processing)  
ST acrylic epoxy polyurethane prepn property  
IT Polyurethanes, preparation  
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(acrylic-epoxy; modification of **aqueous** acrylic-polyurethane via  
epoxy resin postcrosslinking)  
IT Epoxy resins, preparation  
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(acrylic-polyurethane-; modification of **aqueous**  
acrylic-polyurethane via epoxy resin postcrosslinking)  
IT Swelling, physical  
(in **water** and toluene; of **aqueous** acrylic-polyurethane  
modified via epoxy resin postcrosslinking)  
IT Elongation at break  
Tensile strength  
Young's modulus  
(of **aqueous** acrylic-polyurethane modified via epoxy resin

postcrosslinking)

IT **522620-41-3P**  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (**crosslinking** of; in modification of **aqueous** acrylic-polyurethane via epoxy resin postcrosslinking)

IT 108-88-3, Toluene, uses 7732-18-5, **Water**, uses  
 RL: NUU (Other use, unclassified); USES (Uses)  
 (swelling in; of **aqueous** acrylic-polyurethane modified via epoxy resin postcrosslinking)

IT **522620-41-3P**  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (**crosslinking** of; in modification of **aqueous** acrylic-polyurethane via epoxy resin postcrosslinking)

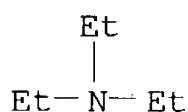
RN 522620-41-3 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl 2-propenoate,  $\alpha$ -hydro- $\omega$ -hydroxypoly[oxy(methyl-1,2-ethanediyl)], 2-hydroxyethyl 2-propenoate, 3-hydroxy-2-(hydroxymethyl)-2-methylpropanoic acid, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane and 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis[oxirane], compd. with N,N-diethylethanamine (9CI) (CA INDEX NAME)

CM 1

CRN 121-44-8

CMF C6 H15 N



CM 2

CRN 522620-36-6

CMF (C21 H24 O4 . C12 H18 N2 O2 . C7 H12 O2 . C5 H10 O4 . C5 H8 O3 . C5 H8 O2 . (C3 H6 O)<sub>n</sub> H2 O)<sub>x</sub>

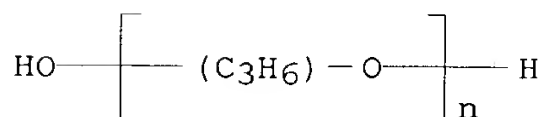
CCI PMS

CM 3

CRN 25322-69-4

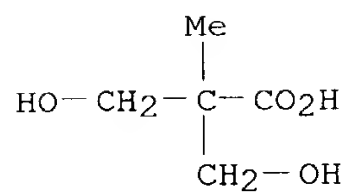
CMF (C3 H6 O)<sub>n</sub> H2 O

CCI IDS, PMS



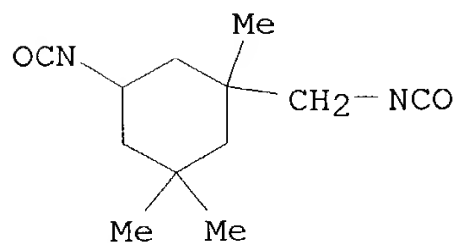
CM 4

CRN 4767-03-7  
CMF C5 H10 O4



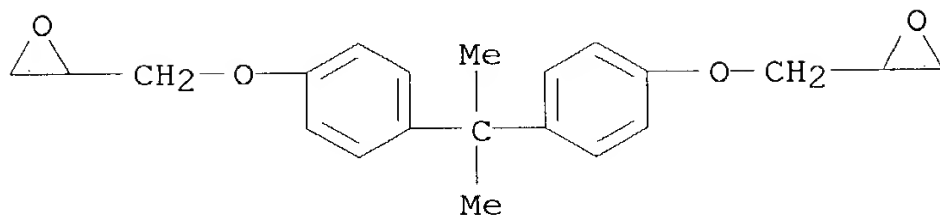
CM 5

CRN 4098-71-9  
CMF C12 H18 N2 O2



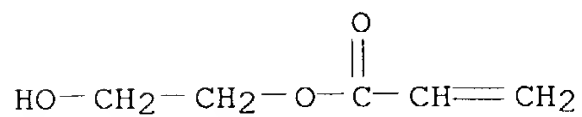
CM 6

CRN 1675-54-3  
CMF C21 H24 O4



CM 7

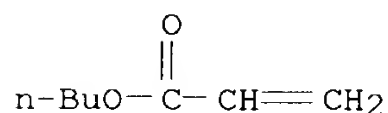
CRN 818-61-1  
CMF C5 H8 O3



CM 8

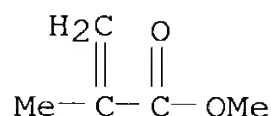
CRN 141-32-2  
CMF C7 H12 O2





CM 9

CRN 80-62-6  
CMF C5 H8 O2



RE.CNT 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L56 ANSWER 4 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN  
AN 2002:636615 HCAPLUS  
DN 137:170692  
TI Adhesive containing acrylic resin emulsion and polyurethane emulsion for lamination  
IN Sugiyama, Yasushi  
PA Chuo Rika Kogyo Corporation, Japan  
SO Jpn. Kokai Tokkyo Koho, 7 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2002235062	A2	20020823	JP 2001-31811	20010208
PRAI	JP 2001-31811		20010208		

AB The adhesive, useful for plastic **films** or printed paper sheets giving laminates with gloss surface, contains a carboxy-substituted acrylic resin emulsion having glass-transition temperature (Tg) from -30° to 0° and a polyurethane emulsion with particle diameter <0.2 μm. The adhesive may further contain an epoxy resin and a **crosslinking** accelerator for the epoxy resin. Thus, Me methacrylate 200, Et acrylate 580, Bu acrylate 200, and methacrylic acid 20 g were emulsion-polymerized in the presence of 200 parts of an 40% (solid) **water**-based emulsion obtained from poly(butylene adipate) 159, 2,2-dimethylolpropionic acid 10.7, and isophorone diisocyanate 53.3 g to give an emulsion mixture, which was neutralized with **aqueous** NH<sub>3</sub>, mixed with 18 g 1,3-bis(hydrazinocarboethyl)-5-isopropylhydantoin and 10 g bisphenol A epoxy resin, and diluted to give 30% **aqueous** solution of a composition. Then, the solution was applied on a polypropylene **film**, dried at 80° for 30 s, laminated with a printed paper on the composition side and the printed side of each substrates, and pressed by hot roll to give a test piece showing good initial adhesion of the substrates and high surface gloss.

IC ICM C09J133-00  
ICS C09J163-00; C09J175-04

- CC 38-3 (Plastics Fabrication and Uses)  
Section cross-reference(s): 43
- ST adhesive acrylic resin emulsion blend lamination; polyurethane emulsion blend adhesive lamination; polypropylene **film** printed paper laminate adhesive; surface gloss laminated printed paper adhesive; methyl methacrylate ethyl acrylate copolymer emulsion; butyl acrylate methacrylic acid copolymer emulsion; polybutylene adipate dimethylolpropionic acid copolymer emulsion; isophorone diisocyanate copolymer polyurethane emulsion
- IT Polyurethanes, uses  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(acrylic-epoxy-polyester-; adhesive containing acrylic resin emulsion and polyurethane emulsion for lamination)
- IT Polyesters, uses  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(acrylic-epoxy-polyurethane-; adhesive containing acrylic resin emulsion and polyurethane emulsion for lamination)
- IT Epoxy resins, uses  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(acrylic-polyester-polyurethane-; adhesive containing acrylic resin emulsion and polyurethane emulsion for lamination)
- IT Adhesives  
Emulsions  
Laminated plastic **films**  
(adhesive containing acrylic resin emulsion and polyurethane emulsion for lamination)
- IT **Crosslinking** catalysts  
(in adhesive containing acrylic resin emulsion, polyurethane emulsion, and epoxy resin for lamination)
- IT Paper  
(printed; adhesive containing acrylic resin emulsion and polyurethane emulsion for lamination of)
- IT **448192-75-4P**, Adipic acid-bisphenol A-butyl acrylate-1,4-butanediol-2,2-dimethylolpropionic acid-epichlorohydrin-ethyl acrylate-isophorone diisocyanate-methacrylic acid-methyl methacrylate copolymer  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(adhesive containing acrylic resin emulsion and polyurethane emulsion for lamination)
- IT 88122-32-1, 1,3-Bis(hydrazinocarboethyl)-5-Isopropylhydandoin  
RL: CAT (Catalyst use); USES (Uses)  
(**crosslinking** accelerator; in adhesive containing acrylic resin emulsion, polyurethane emulsion, and epoxy resin for lamination)
- IT 9003-07-0, Polypropylene  
RL: MSC (Miscellaneous)  
(**film**; adhesive containing acrylic resin emulsion and polyurethane emulsion for lamination of)
- IT **448192-75-4P**, Adipic acid-bisphenol A-butyl acrylate-1,4-butanediol-2,2-dimethylolpropionic acid-epichlorohydrin-ethyl acrylate-isophorone diisocyanate-methacrylic acid-methyl methacrylate copolymer  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(adhesive containing acrylic resin emulsion and polyurethane emulsion for

lamination)

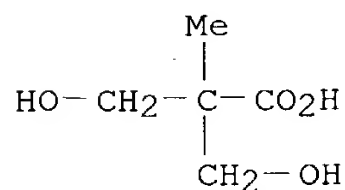
RN 448192-75-4 HCAPLUS

CN Hexanedioic acid, polymer with 1,4-butanediol, butyl 2-propenoate, (chloromethyl)oxirane, ethyl 2-propenoate, 3-hydroxy-2-(hydroxymethyl)-2-methylpropanoic acid, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane, 4,4'-(1-methylethylidene)bis[phenol], methyl 2-methyl-2-propenoate and 2-methyl-2-propenoic acid (9CI) (CA INDEX NAME)

CM 1

CRN 4767-03-7

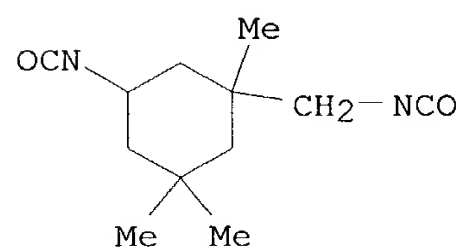
CMF C5 H10 O4



CM 2

CRN 4098-71-9

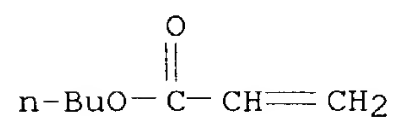
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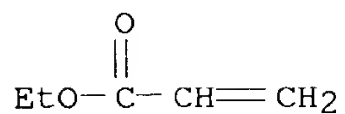
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CM 4

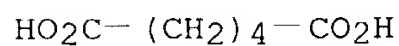
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CMF C5 H8 O2



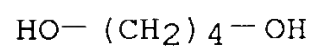
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CRN 124-04-9  
CMF C6 H10 O4



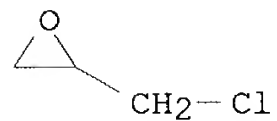
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CRN 110-63-4  
CMF C4 H10 O2



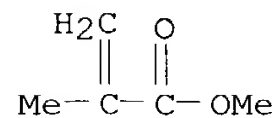
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CRN 106-89-8  
CMF C3 H5 Cl O



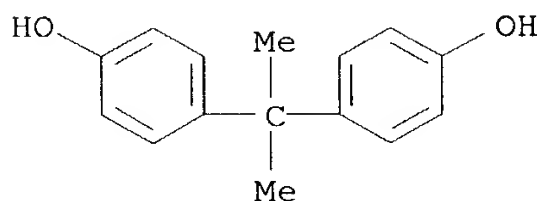
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CRN 80-62-6  
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CM 9

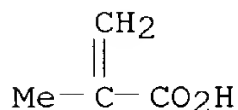
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CMF C15 H16 O2



CM 10

CRN 79-41-4

CMF C4 H6 O2



L56 ANSWER 5 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2002:400361 HCAPLUS

DN 136:402844

TI Fire-resistant polymer compositions and their laminates

IN Togawa, Keiichiro; Hattori, Takahiro; Tajika, Hiroshi

PA Toyobo Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 21 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2002155211	A2	20020528	JP 2001-137746	20010508

PRAI JP 2000-270243 A 20000906

JP 2000-270244 A 20000906

AB The compns. contain organic polymers and halogen-free fireproofing agents containing P. Thus, a composition containing 65 parts isophthalic acid-1,4-cyclohexanedicarboxylic acid-sodium 5-sulfoisophthalate-neopentyl glycol-1,6-cyclohexanediol copolymer and 35 parts melamine phosphate was applied on a PET **film** (E 5000) and dried to give an adhesive **film** showing fire resistance (UL 94 test) V-0 and good interlayer adhesion before and after soaking in boiling **water** for 1 h.

IC ICM C08L101-00

ICS B32B027-18; C08K005-3492; C08K005-52; C09K021-04; C09K021-12

CC 38-3 (Plastics Fabrication and Uses)

ST polyester adhesive **film** fire resistance; melamine phosphate fireproofing agent adhesive **film**; **water** resistance polyester adhesive **film**; halogen free fireproofing polyester adhesive **film**

IT Polyesters, uses

RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (acrylic; fire-resistant polymer compns. for adhesive **films** with good **water** resistance)

IT Polyphosphoric acids

RL: MOA (Modifier or additive use); TEM (Technical or engineered material

use); USES (Uses)  
 (ammonium salts, fireproofing agents; fire-resistant polymer compns.  
 for adhesive **films** with good **water** resistance)

IT Polyesters, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (base **films**; fire-resistant polymer compns. for adhesive  
**films** with good **water** resistance)

IT Polyesters, uses  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM  
 (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (epoxy, acrylic; fire-resistant polymer compns. for adhesive  
**films** with good **water** resistance)

IT Polyesters, uses  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM  
 (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (epoxy; fire-resistant polymer compns. for adhesive **films**  
 with good **water** resistance)

IT Adhesive **films**  
 (fire-resistant polymer compns. for adhesive **films** with good  
**water** resistance)

IT Polyesters, uses  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); RCT  
 (Reactant); TEM (Technical or engineered material use); PREP  
 (Preparation); RACT (Reactant or reagent); USES (Uses)  
 (fire-resistant polymer compns. for adhesive **films** with good  
**water** resistance)

IT Acrylic polymers, uses  
 RL: POF (Polymer in formulation); TEM (Technical or engineered material  
 use); USES (Uses)  
 (fire-resistant polymer compns. for adhesive **films** with good  
**water** resistance)

IT **Water**-resistant materials  
 (fire-resistant; fire-resistant polymer compns. for adhesive  
**films** with good **water** resistance)

IT Fireproofing agents  
 (halogen-free; fire-resistant polymer compns. for adhesive  
**films** with good **water** resistance)

IT Epoxy resins, uses  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM  
 (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (polyester-, acrylic; fire-resistant polymer compns. for adhesive  
**films** with good **water** resistance)

IT Polyurethanes, uses  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM  
 (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (polyester-, block; fire-resistant polymer compns. for adhesive  
**films** with good **water** resistance)

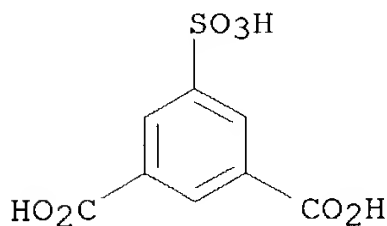
IT Epoxy resins, uses  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM  
 (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (polyester-; fire-resistant polymer compns. for adhesive **films**  
 with good **water** resistance)

IT Fire-resistant materials  
 (**water**-resistant; fire-resistant polymer compns. for adhesive  
**films** with good **water** resistance)

IT 149316-32-5, PM 210  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (adhesive layers; fire-resistant polymer compns. for adhesive

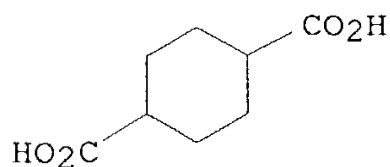
- films with good water resistance)**
- IT 25038-59-9, E 5000, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (base **films**; fire-resistant polymer compns. for adhesive
- films with good water resistance)**
- IT 405873-51-0P 405873-52-1P 405873-53-2P **405873-61-2P**  
 405873-62-3P 430439-85-3P **430439-86-4P 430439-87-5P**  
 430439-88-6P **430439-89-7P 430439-90-0P**  
**430439-91-1P**  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM  
 (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (**crosslinked**; fire-resistant polymer compns. for adhesive
- films with good water resistance)**
- IT 142518-39-6P 164154-23-8P, Ethylene glycol-isophthalic acid-neopentyl  
 glycol-sodium 5-sulfoisophthalate-terephthalic acid-trimellitic acid  
 copolymer 167360-08-9P, 1,4-Cyclohexanedicarboxylic acid-1,6-hexanediol-  
 isophthalic acid-neopentyl glycol copolymer 340815-58-9P,  
 1,4-Cyclohexanedicarboxylic acid-1,4-cyclohexanedimethanol-ethyl  
 acrylate-fumaric acid-isophthalic acid-neopentyl glycol copolymer  
 340815-59-0P, 1,4-Cyclohexanedicarboxylic acid-1,4-cyclohexanedimethanol-  
 ethyl acrylate-fumaric acid-methacrylic acid-neopentyl glycol-sebacic  
 acid-sodium 5-sulfoisophthalate copolymer 340830-38-8P,  
 1,4-Cyclohexanedicarboxylic acid-1,6-hexanediol-isophthalic acid-neopentyl  
 glycol-sodium 5-sulfoisophthalate copolymer 405873-50-9P,  
 1,4-Cyclohexanedicarboxylic acid-1,4-cyclohexanedimethanol-neopentyl  
 glycol-orthophthalic acid-sebacic acid-sodium 5-sulfoisophthalate-  
 terephthalic acid-trimellitic acid copolymer 405873-63-4P,  
 1,4-Cyclohexanedicarboxylic acid-1,4-cyclohexanedimethanol-ethyl  
 acrylate-fumaric acid-isophthalic acid-neopentyl glycol-sodium  
 5-sulfoisophthalate copolymer 405873-69-0P, 1,4-Cyclohexanedicarboxylic  
 acid-1,4-cyclohexanedimethanol-neopentyl glycol-phthalic acid-sebacic  
 acid-terephthalic acid-trimellitic acid copolymer 405873-76-9P,  
 1,4-Cyclohexanedicarboxylic acid-1,4-cyclohexanedimethanol-ethyl  
 acrylate-fumaric acid-methacrylic acid-neopentyl glycol-sebacic acid  
 copolymer  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); RCT  
 (Reactant); TEM (Technical or engineered material use); PREP  
 (Preparation); RACT (Reactant or reagent); USES (Uses)  
 (fire-resistant polymer compns. for adhesive **films with good**  
**water resistance)**
- IT 405873-55-4P 405873-57-6P **405873-60-1P**, 1,4-  
 Cyclohexanedicarboxylic acid-1,4-cyclohexanedimethanol-hexamethylene  
 diisocyanate-neopentyl glycol-phthalic acid-sebacic acid-sodium  
 5-sulfoisophthalate-terephthalic acid-trimellitic acid copolymer  
 405873-70-3P, 1,4-Cyclohexanedicarboxylic acid-1,4-cyclohexanedimethanol-  
 Cymel 254-neopentyl glycol-phthalic acid-sebacic acid-terephthalic  
 acid-trimellitic acid copolymer 405873-71-4P **405873-77-0P**  
 405873-78-1P **430439-84-2P 430439-92-2P**,  
 1,4-Cyclohexanedicarboxylic acid-1,6-hexanediol-isophorone  
 diisocyanate-isophthalic acid-neopentyl glycol block copolymer  
**430439-93-3P**, 1,4-Cyclohexanedicarboxylic acid-1,4-  
 cyclohexanedimethanol-hexamethylene diisocyanate-neopentyl glycol-phthalic  
 acid-sebacic acid-terephthalic acid-trimellitic acid block copolymer  
**430439-94-4P 430439-95-5P 430439-96-6P**  
**430439-97-7P**  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM  
 (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (fire-resistant polymer compns. for adhesive **films with good**

**water** resistance)  
 IT 58229-85-9, Paraloid B 44  
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
 (fire-resistant polymer compns. for adhesive **films** with good **water** resistance)  
**water** resistance)  
 IT 41583-09-9, Melamine phosphate 66813-75-0, Sumisafe PM 99550-96-6, Taien S 212913-40-1, PMP 300 243144-78-7, PMP 100 380366-74-5, PMP 200  
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)  
 (fireproofing agents; fire-resistant polymer compns. for adhesive **films** with good **water** resistance)  
 IT **405873-61-2P 430439-86-4P 430439-87-5P 430439-89-7P 430439-90-0P 430439-91-1P**  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (**crosslinked**; fire-resistant polymer compns. for adhesive **films** with good **water** resistance)  
 RN 405873-61-2 HCAPLUS  
 CN 1,3-Benzenedicarboxylic acid, 5-sulfo-, monosodium salt, polymer with 1,3-benzenedicarboxylic acid, (2E)-2-butenedioic acid, (chloromethyl)oxirane, 1,4-cyclohexanedicarboxylic acid, 1,4-cyclohexanedimethanol, 2,2-dimethyl-1,3-propanediol, ethyl 2-propenoate and 4,4'-(1-methylethylidene)bis[phenol] (9CI) (CA INDEX NAME)  
 CM 1  
 CRN 6362-79-4  
 CMF C8 H6 O7 S . Na



● Na

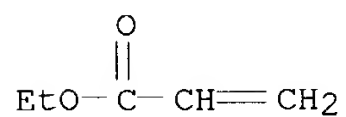
CM 2  
 CRN 1076-97-7  
 CMF C8 H12 O4





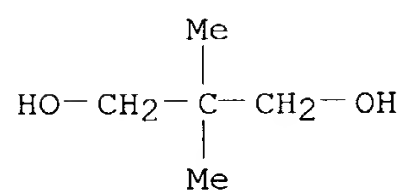
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CRN 140-88-5  
CMF C5 H8 O2



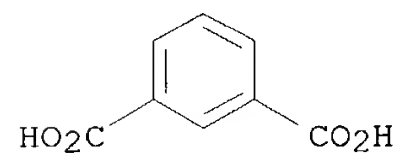
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CM 5

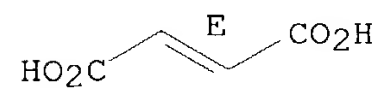
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CM 6

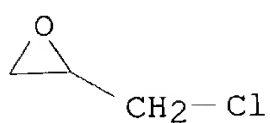
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CMF C4 H4 O4

Double bond geometry as shown.



CM 7

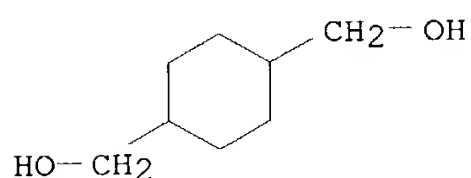
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CM 8

CRN 105-08-8

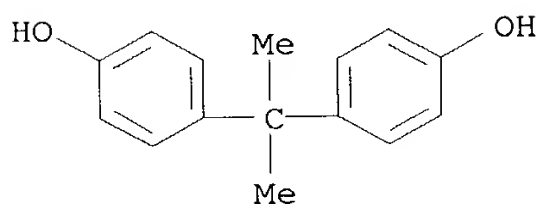
CMF C8 H16 O2



CM 9

CRN 80-05-7

CMF C15 H16 O2



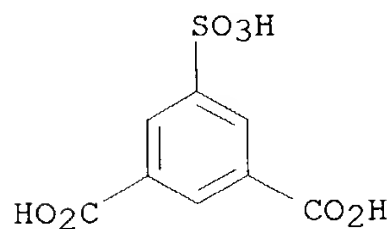
RN 430439-86-4 HCAPLUS

CN 1,2,4-Benzenetricarboxylic acid, polymer with 1,2-benzenedicarboxylic acid, 1,4-benzenedicarboxylic acid, 1,4-cyclohexanedicarboxylic acid, 1,4-cyclohexanedimethanol, decanedioic acid, 2,2-dimethyl-1,3-propanediol, 5-sulfo-1,3-benzenedicarboxylic acid monosodium salt and 1,3,5-tris(6-isocyanatohexyl)-1,3,5-triazine-2,4,6(1H,3H,5H)-trione (9CI) (CA INDEX NAME)

CM 1

CRN 6362-79-4

CMF C8 H6 O7 S . Na

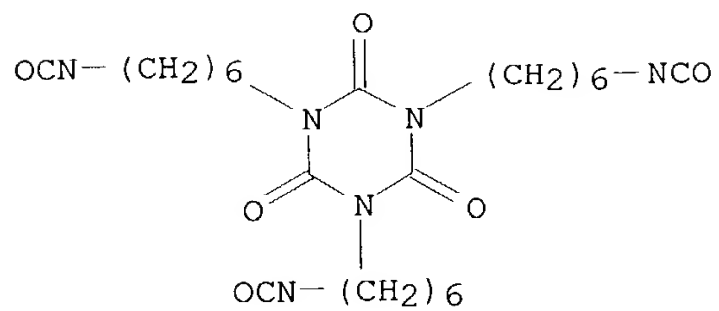


● Na

CM 2

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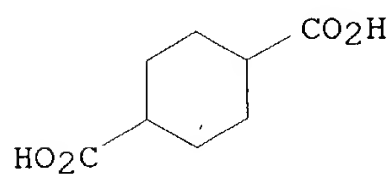
CMF C24 H36 N6 O6



CM 3

CRN 1076-97-7

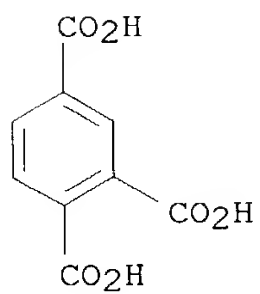
CMF C8 H12 O4



CM 4

CRN 528-44-9

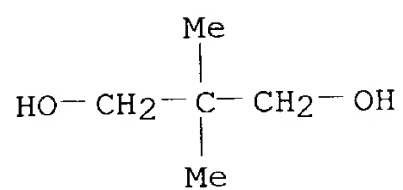
CMF C9 H6 O6



CM 5

CRN 126-30-7

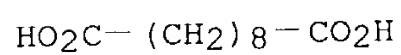
CMF C5 H12 O2



CM 6

CRN 111-20-6

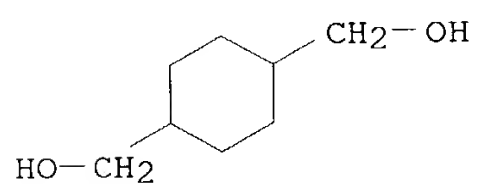
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CM 7

CRN 105-08-8

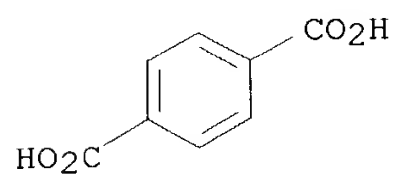
CMF C8 H16 O2



CM 8

CRN 100-21-0

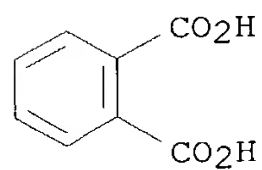
CMF C8 H6 O4



CM 9

CRN 88-99-3

CMF C8 H6 O4



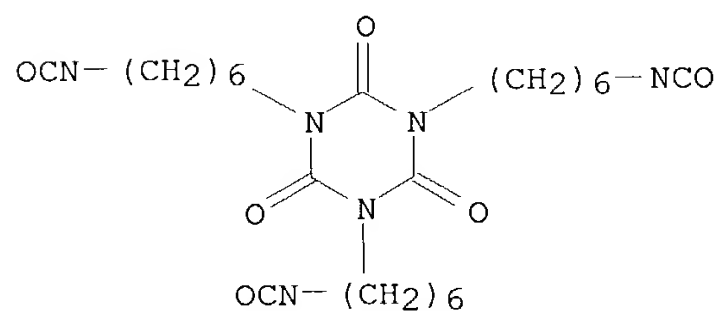
RN 430439-87-5 HCAPLUS

CN 1,2,4-Benzenetricarboxylic acid, polymer with 1,3-benzenedicarboxylic acid, 1,4-benzenedicarboxylic acid, 2,2-dimethyl-1,3-propanediol, 1,6-hexanediol and 1,3,5-tris(6-isocyanatohexyl)-1,3,5-triazine-2,4,6(1H,3H,5H)-trione (9CI) (CA INDEX NAME)

CM 1

CRN 3779-63-3

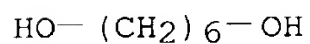
CMF C24 H36 N6 O6



CM 2

CRN 629-11-8

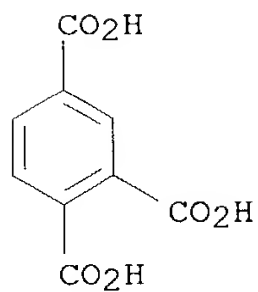
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CM 3

CRN 528-44-9

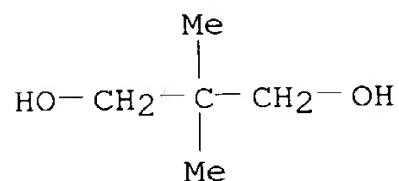
CMF C9 H6 O6



CM 4

CRN 126-30-7

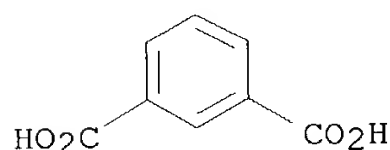
CMF C5 H12 O2



CM 5

CRN 121-91-5

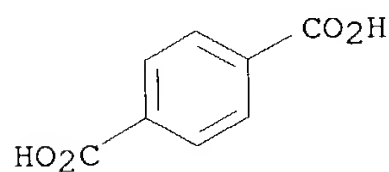
CMF C8 H6 O4



CM 6

CRN 100-21-0

CMF C8 H6 O4



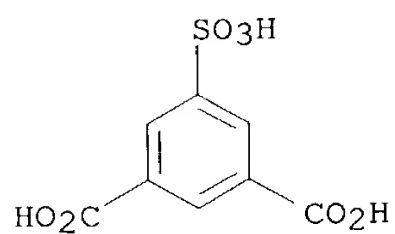
RN 430439-89-7 HCAPLUS

CN 1,2,4-Benzenetricarboxylic acid, polymer with 1,3-benzenedicarboxylic acid, 1,4-benzenedicarboxylic acid, (chloromethyl)oxirane, 2,2-dimethyl-1,3-propanediol, 1,2-ethanediol, 4,4'-(1-methylethylidene)bis[phenol], 5-sulfo-1,3-benzenedicarboxylic acid monosodium salt and 1,3,5-tris(6-isocyanatohexyl)-1,3,5-triazine-2,4,6(1H,3H,5H)-trione (9CI) (CA INDEX NAME)

CM 1

CRN 6362-79-4

CMF C8 H6 O7 S . Na

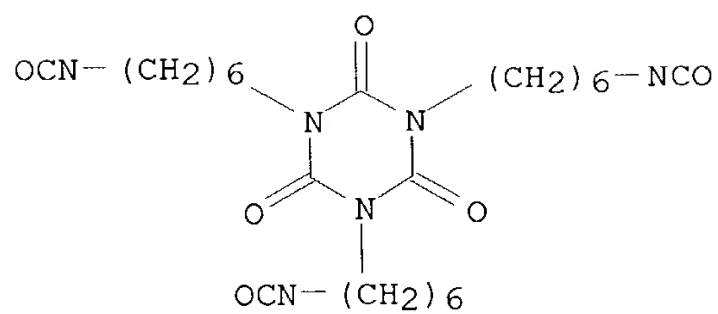


● Na

CM 2

CRN 3779-63-3

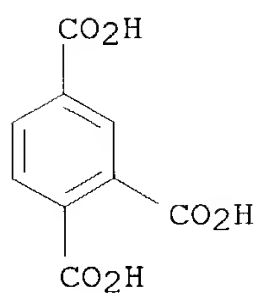
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CM 3

CRN 528-44-9

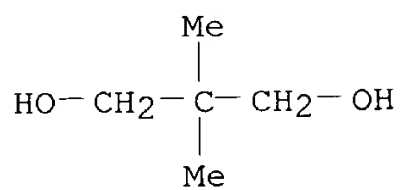
CMF C9 H6 O6



CM 4

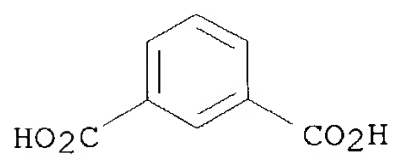
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CMF C5 H12 O2



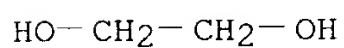
CM 5

CRN 121-91-5  
CMF C8 H6 O4



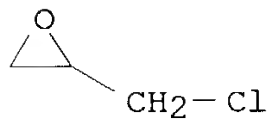
CM 6

CRN 107-21-1  
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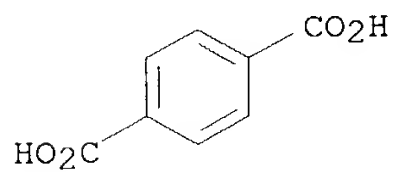
CM 7

CRN 106-89-8  
CMF C3 H5 Cl O



CM 8

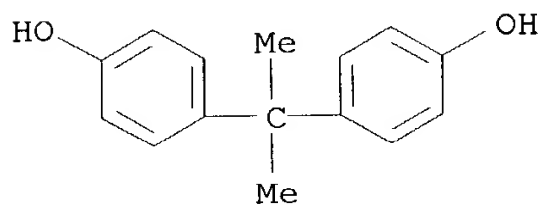
CRN 100-21-0  
CMF C8 H6 O4



CM 9



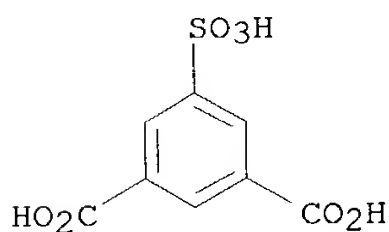
CRN 80-05-7  
CMF C15 H16 O2



RN 430439-90-0 HCAPLUS  
CN 1,2,4-Benzenetricarboxylic acid, polymer with 1,3-benzenedicarboxylic acid, 1,4-benzenedicarboxylic acid, 2,2-dimethyl-1,3-propanediol, 1,2-ethanediol, 5-sulfo-1,3-benzenedicarboxylic acid monosodium salt and 1,3,5-tris(6-isocyanatohexyl)-1,3,5-triazine-2,4,6(1H,3H,5H)-trione (9CI)  
(CA INDEX NAME)

CM 1

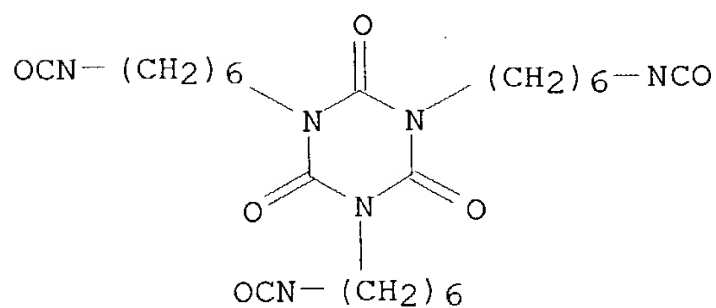
CRN 6362-79-4  
CMF C8 H6 O7 S . Na



● Na

CM 2

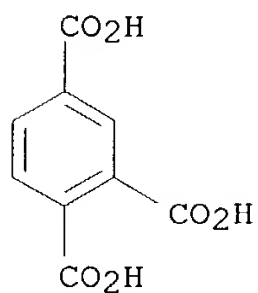
CRN 3779-63-3  
CMF C24 H36 N6 O6



CM 3

CRN 528-44-9

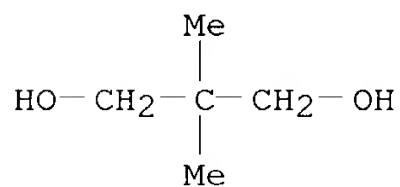
CMF C9 H6 O6



CM 4

CRN 126-30-7

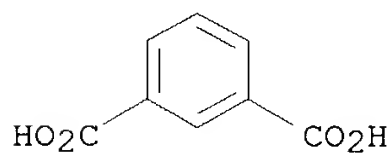
CMF C5 H12 O2



CM 5

CRN 121-91-5

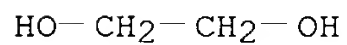
CMF C8 H6 O4



CM 6

CRN 107-21-1

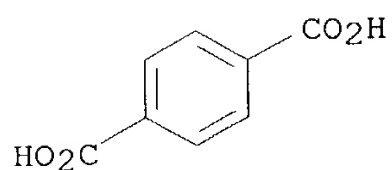
CMF C2 H6 O2



CM 7

CRN 100-21-0

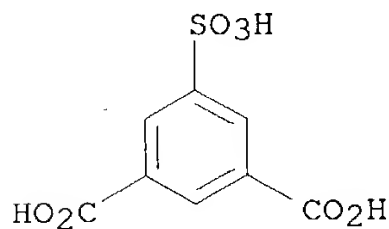
CMF C8 H6 O4



RN 430439-91-1 HCAPLUS  
 CN 1,3-Benzenedicarboxylic acid, 5-sulfo-, monosodium salt, polymer with  
 (2E)-2-butenedioic acid, 1,4-cyclohexanedicarboxylic acid,  
 1,4-cyclohexanedimethanol, decanedioic acid, 2,2-dimethyl-1,3-propanediol,  
 ethyl 2-propenoate, 2-methyl-2-propenoic acid and 1,3,5-tris(6-  
 isocyanatohexyl)-1,3,5-triazine-2,4,6(1H,3H,5H)-trione (9CI) (CA INDEX  
 NAME)

CM 1

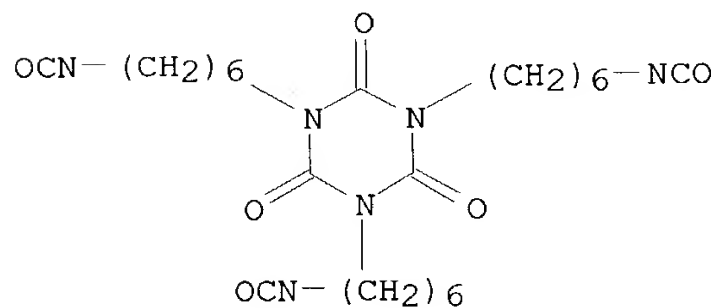
CRN 6362-79-4  
 CMF C8 H6 O7 S . Na



● Na

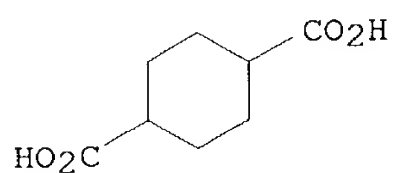
CM 2

CRN 3779-63-3  
 CMF C24 H36 N6 O6



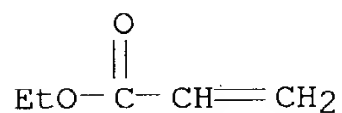
CM 3

CRN 1076-97-7  
 CMF C8 H12 O4



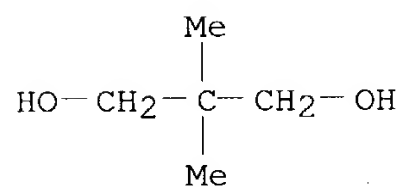
CM 4

CRN 140-88-5  
CMF C5 H8 O2



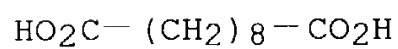
CM 5

CRN 126-30-7  
CMF C5 H12 O2



CM 6

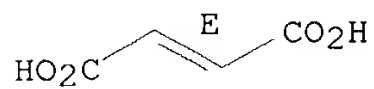
CRN 111-20-6  
CMF C10 H18 O4



CM 7

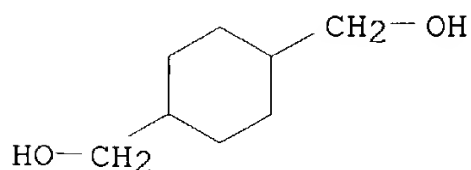
CRN 110-17-8  
CMF C4 H4 O4

Double bond geometry as shown.



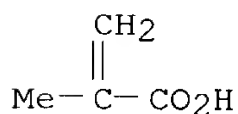
CM 8

CRN 105-08-8  
CMF C8 H16 O2



CM 9

CRN 79-41-4  
CMF C4 H6 O2



IT **405873-60-1P**, 1,4-Cyclohexanedicarboxylic acid-1,4-cyclohexanedimethanol-hexamethylene diisocyanate-neopentyl glycol-phthalic acid-sebacic acid-sodium 5-sulfoisophthalate-terephthalic acid-trimellitic acid copolymer **405873-77-0P 430439-84-2P 430439-92-2P**, 1,4-Cyclohexanedicarboxylic acid-1,6-hexanediol-isophorone diisocyanate-isophthalic acid-neopentyl glycol block copolymer **430439-93-3P**, 1,4-Cyclohexanedicarboxylic acid-1,4-cyclohexanedimethanol-hexamethylene diisocyanate-neopentyl glycol-phthalic acid-sebacic acid-terephthalic acid-trimellitic acid block copolymer **430439-94-4P 430439-95-5P 430439-96-6P 430439-97-7P**

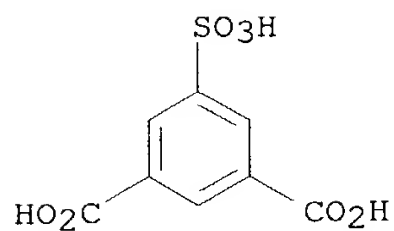
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (fire-resistant polymer compns. for adhesive **films** with good **water** resistance)

RN 405873-60-1 HCAPLUS

CN 1,2,4-Benzenetricarboxylic acid, polymer with 1,2-benzenedicarboxylic acid, 1,4-benzenedicarboxylic acid, 1,4-cyclohexanedicarboxylic acid, 1,4-cyclohexanedimethanol, decanedioic acid, 1,6-diisocyanatohexane, 2,2-dimethyl-1,3-propanediol and 5-sulfo-1,3-benzenedicarboxylic acid monosodium salt (9CI) (CA INDEX NAME)

CM 1

CRN 6362-79-4  
CMF C8 H6 O7 S . Na

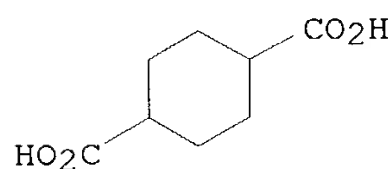


● Na

CM 2

CRN 1076-97-7

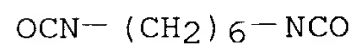
CMF C8 H12 O4



CM 3

CRN 822-06-0

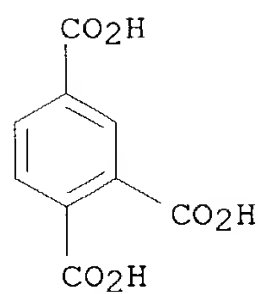
CMF C8 H12 N2 O2



CM 4

CRN 528-44-9

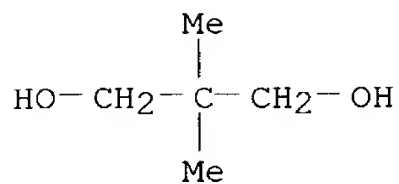
CMF C9 H6 O6



CM 5

CRN 126-30-7

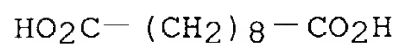
CMF C5 H12 O2



CM 6

CRN 111-20-6

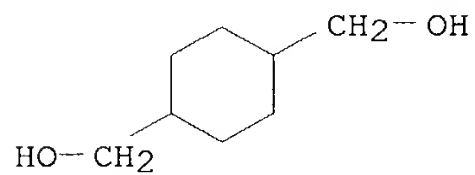
CMF C10 H18 O4



CM 7

CRN 105-08-8

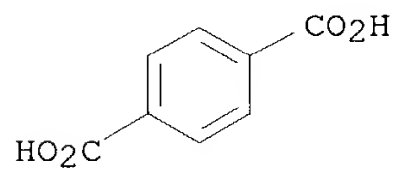
CMF C8 H16 O2



CM 8

CRN 100-21-0

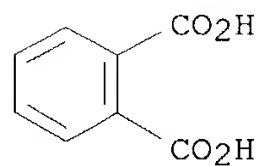
CMF C8 H6 O4



CM 9

CRN 88-99-3

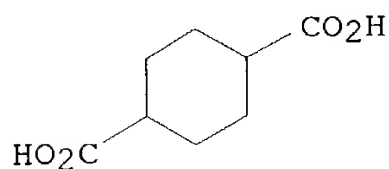
CMF C8 H6 O4



RN 405873-77-0 HCAPLUS  
 CN 1,3-Benzenedicarboxylic acid, polymer with (2E)-2-butenedioic acid,  
 (chloromethyl)oxirane, 1,4-cyclohexanedicarboxylic acid,  
 1,4-cyclohexanedimethanol, 2,2-dimethyl-1,3-propanediol, ethyl  
 2-propenoate and 4,4'-(1-methylethylidene)bis[phenol] (9CI) (CA INDEX  
 NAME)

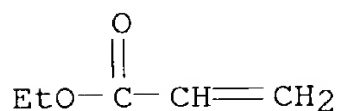
CM 1

CRN 1076-97-7  
 CMF C8 H12 O4



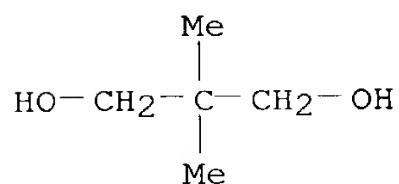
CM 2

CRN 140-88-5  
 CMF C5 H8 O2



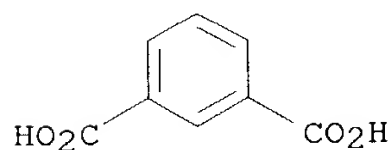
CM 3

CRN 126-30-7  
 CMF C5 H12 O2



CM 4

CRN 121-91-5  
 CMF C8 H6 O4



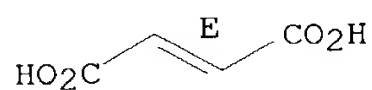


CM 5

CRN 110-17-8

CMF C4 H4 O4

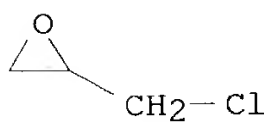
Double bond geometry as shown.



CM 6

CRN 106-89-8

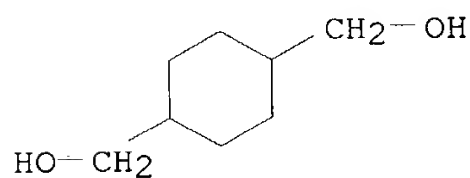
CMF C3 H5 Cl O



CM 7

CRN 105-08-8

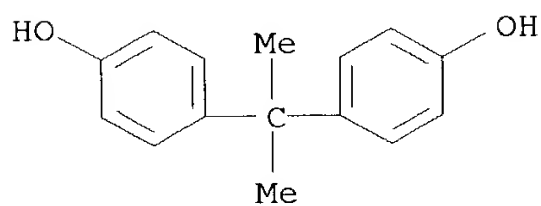
CMF C8 H16 O2



CM 8

CRN 80-05-7

CMF C15 H16 O2



RN 430439-84-2 HCAPLUS

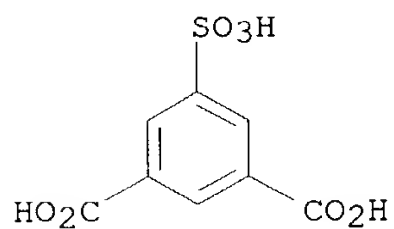
CN 1,3-Benzenedicarboxylic acid, 5-sulfo-, monosodium salt, polymer with  
 1,3-benzenedicarboxylic acid, 1,4-cyclohexanedicarboxylic acid,  
 2,2-dimethyl-1,3-propanediol, 1,6-hexanediol and 5-isocyanato-1-  
 (isocyanatomethyl)-1,3,3-trimethylcyclohexane, block (9CI) (CA INDEX

NAME)

CM 1

CRN 6362-79-4

CMF C8 H6 O7 S . Na

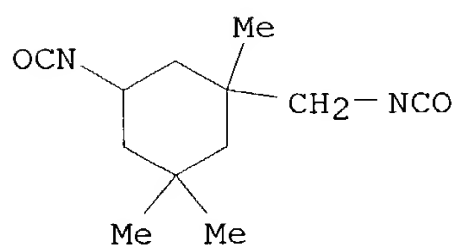


● Na

CM 2

CRN 4098-71-9

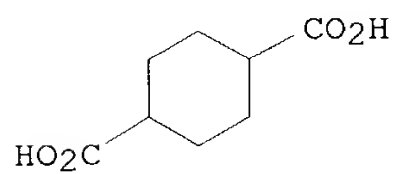
CMF C12 H18 N2 O2



CM 3

CRN 1076-97-7

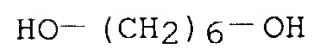
CMF C8 H12 O4



CM 4

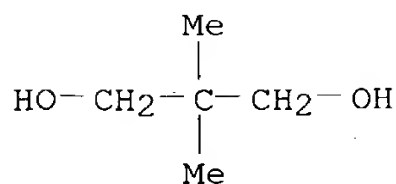
CRN 629-11-8

CMF C6 H14 O2



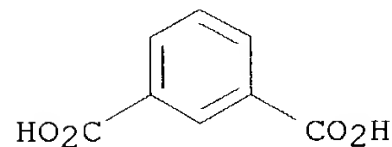
CM 5

CRN 126-30-7  
CMF C5 H12 O2



CM 6

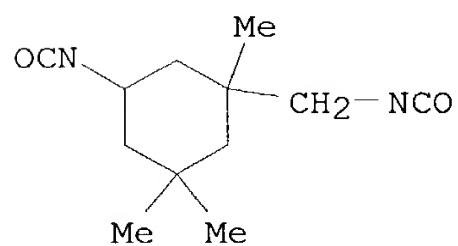
CRN 121-91-5  
CMF C8 H6 O4



RN 430439-92-2 HCAPLUS  
CN 1,3-Benzenedicarboxylic acid, polymer with 1,4-cyclohexanedicarboxylic acid, 2,2-dimethyl-1,3-propanediol, 1,6-hexanediol and 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane, block (9CI) (CA INDEX NAME)

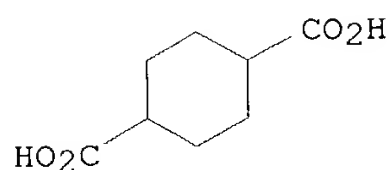
CM 1

CRN 4098-71-9  
CMF C12 H18 N2 O2



CM 2

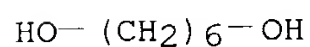
CRN 1076-97-7  
CMF C8 H12 O4



CM 3

CRN 629-11-8

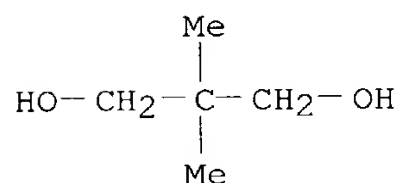
CMF C6 H14 O2



CM 4

CRN 126-30-7

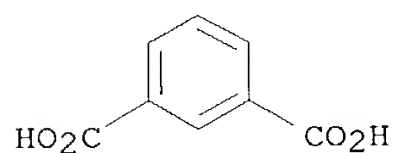
CMF C5 H12 O2



CM 5

CRN 121-91-5

CMF C8 H6 O4



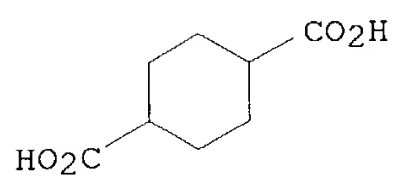
RN 430439-93-3 HCAPLUS

CN 1,2,4-Benzenetricarboxylic acid, polymer with 1,2-benzenedicarboxylic acid, 1,4-benzenedicarboxylic acid, 1,4-cyclohexanedicarboxylic acid, 1,4-cyclohexanedimethanol, decanedioic acid, 1,6-diisocyanatohexane and 2,2-dimethyl-1,3-propanediol, block (9CI) (CA INDEX NAME)

CM 1

CRN 1076-97-7

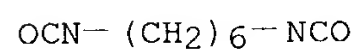
CMF C8 H12 O4



CM 2

CRN 822-06-0

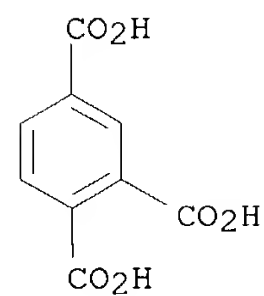
CMF C8 H12 N2 O2



CM 3

CRN 528-44-9

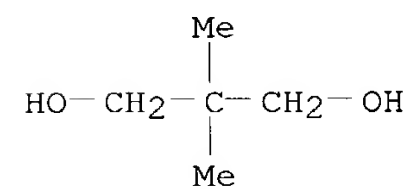
CMF C9 H6 O6



CM 4

CRN 126-30-7

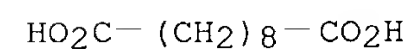
CMF C5 H12 O2



CM 5

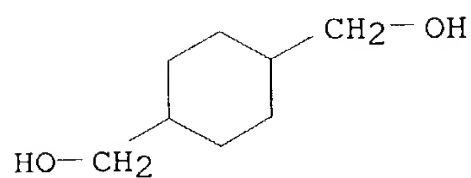
CRN 111-20-6

CMF C10 H18 O4



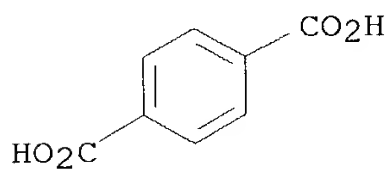
CM 6

CRN 105-08-8  
CMF C8 H16 O2



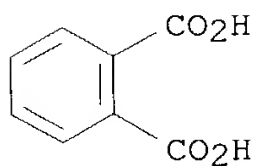
CM 7

CRN 100-21-0  
CMF C8 H6 O4



CM 8

CRN 88-99-3  
CMF C8 H6 O4

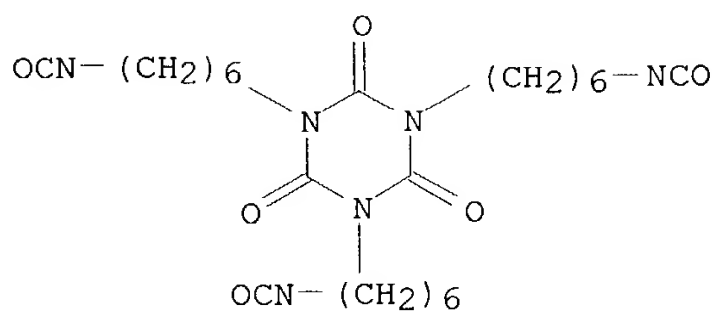


RN 430439-94-4 HCAPLUS

CN 1,2,4-Benzenetricarboxylic acid, polymer with 1,2-benzenedicarboxylic acid, 1,4-benzenedicarboxylic acid, 1,4-cyclohexanedicarboxylic acid, 1,4-cyclohexanedimethanol, decanedioic acid, 2,2-dimethyl-1,3-propanediol and 1,3,5-tris(6-isocyanatohexyl)-1,3,5-triazine-2,4,6(1H,3H,5H)-trione (9CI) (CA INDEX NAME)

CM 1

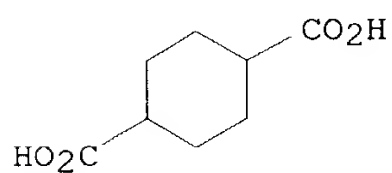
CRN 3779-63-3  
CMF C24 H36 N6 O6



CM 2

CRN 1076-97-7

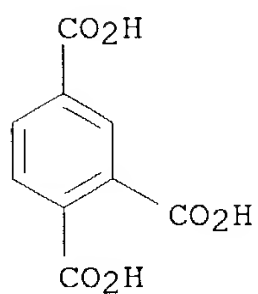
CMF C8 H12 O4



CM 3

CRN 528-44-9

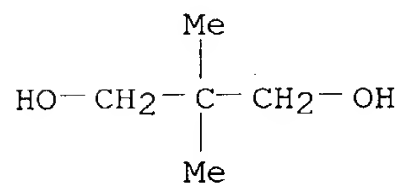
CMF C9 H6 O6



CM 4

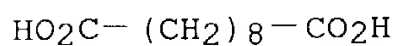
CRN 126-30-7

CMF C5 H12 O2



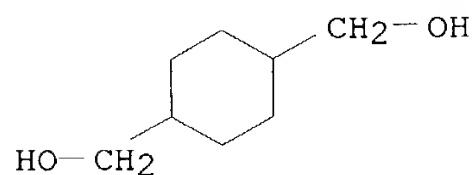
CM 5

CRN 111-20-6  
CMF C10 H18 O4



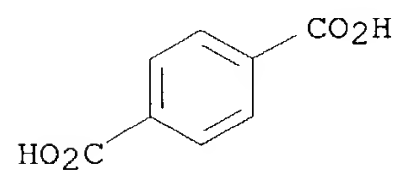
CM 6

CRN 105-08-8  
CMF C8 H16 O2



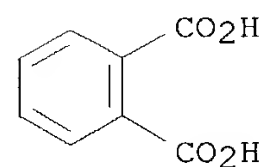
CM 7

CRN 100-21-0  
CMF C8 H6 O4



CM 8

CRN 88-99-3  
CMF C8 H6 O4

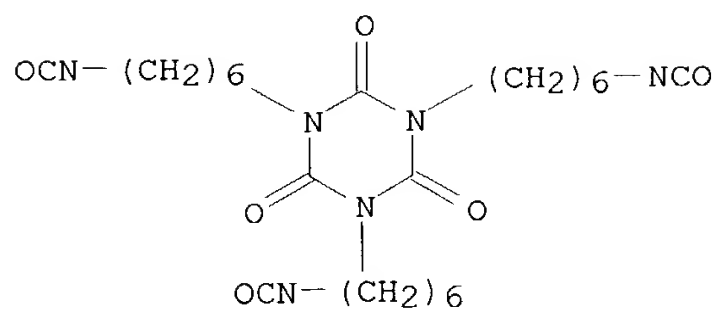


RN 430439-95-5 HCAPLUS  
CN 1,4-Cyclohexanedicarboxylic acid, polymer with (2E)-2-butenedioic acid, 1,4-cyclohexanedimethanol, decanedioic acid, 2,2-dimethyl-1,3-propanediol, ethyl 2-propenoate, 2-methyl-2-propenoic acid and 1,3,5-tris(6-isocyanatohexyl)-1,3,5-triazine-2,4,6(1H,3H,5H)-trione (9CI) (CA INDEX NAME)

CM 1

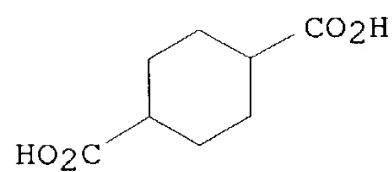
CRN 3779-63-3  
CMF C24 H36 N6 O6





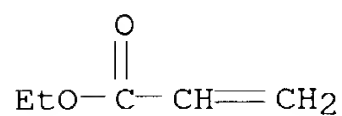
CM 2

CRN 1076-97-7  
CMF C8 H12 O4



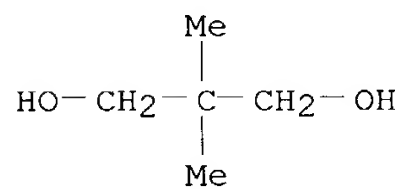
CM 3

CRN 140-88-5  
CMF C5 H8 O2



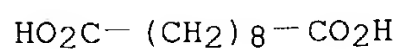
CM 4

CRN 126-30-7  
CMF C5 H12 O2



CM 5

CRN 111-20-6  
CMF C10 H18 O4

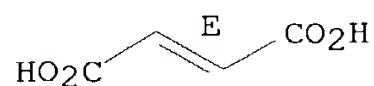


CM 6

CRN 110-17-8

CMF C4 H4 O4

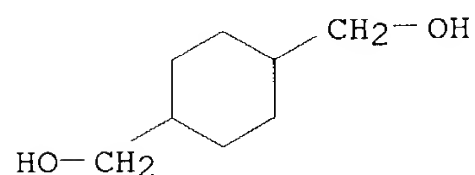
Double bond geometry as shown.



CM 7

CRN 105-08-8

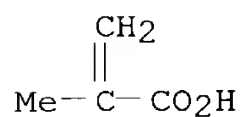
CMF C8 H16 O2



CM 8

CRN 79-41-4

CMF C4 H6 O2



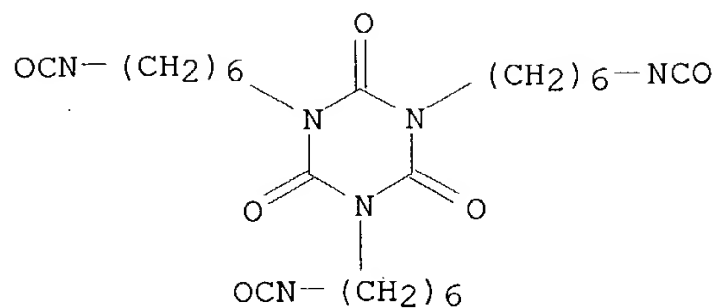
RN 430439-96-6 HCAPLUS

CN 1,2,4-Benzenetricarboxylic acid, polymer with 1,3-benzenedicarboxylic acid, 1,4-benzenedicarboxylic acid, (chloromethyl)oxirane, 2,2-dimethyl-1,3-propanediol, 1,6-hexanediol, 4,4'-(1-methylethylidene)bis[phenol] and 1,3,5-tris(6-isocyanatohexyl)-1,3,5-triazine-2,4,6(1H,3H,5H)-trione (9CI) (CA INDEX NAME)

CM 1

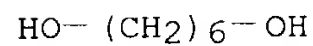
CRN 3779-63-3

CMF C24 H36 N6 O6



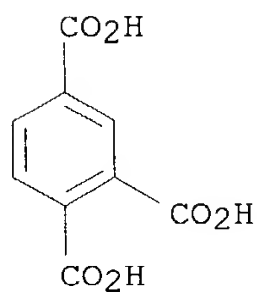
CM 2

CRN 629-11-8  
CMF C6 H14 O2



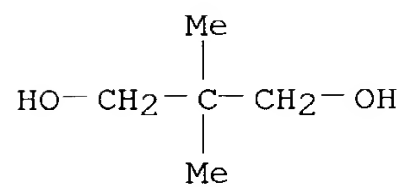
CM 3

CRN 528-44-9  
CMF C9 H6 O6



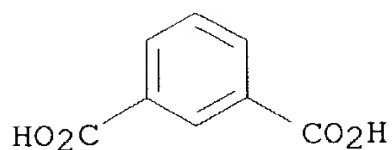
CM 4

CRN 126-30-7  
CMF C5 H12 O2



CM 5

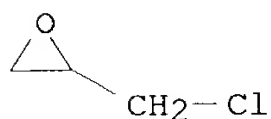
CRN 121-91-5  
CMF C8 H6 O4



CM 6

CRN 106-89-8

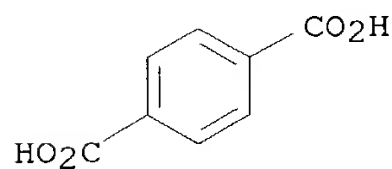
CMF C3 H5 Cl O



CM 7

CRN 100-21-0

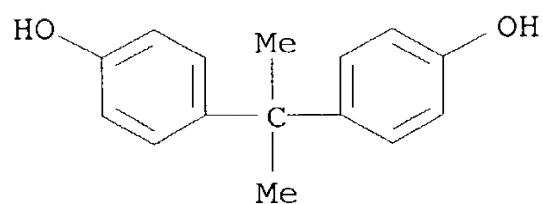
CMF C8 H6 O4



CM 8

CRN 80-05-7

CMF C15 H16 O2



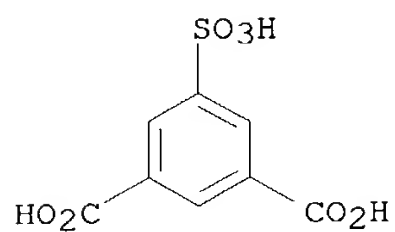
RN 430439-97-7 HCAPLUS

CN 1,2,4-Benzenetricarboxylic acid, polymer with 1,2-benzenedicarboxylic acid, 1,4-benzenedicarboxylic acid, (chloromethyl)oxirane, 1,4-cyclohexanedicarboxylic acid, 1,4-cyclohexanedimethanol, decanedioic acid, 2,2-dimethyl-1,3-propanediol, 4,4'-(1-methylethylidene)bis[phenol], 5-sulfo-1,3-benzenedicarboxylic acid sodium salt and 1,3,5-tris(6-isocyanatohexyl)-1,3,5-triazine-2,4,6(1H,3H,5H)-trione (9CI) (CA INDEX NAME)

CM 1

CRN 6362-79-4

CMF C8 H6 O7 S . Na

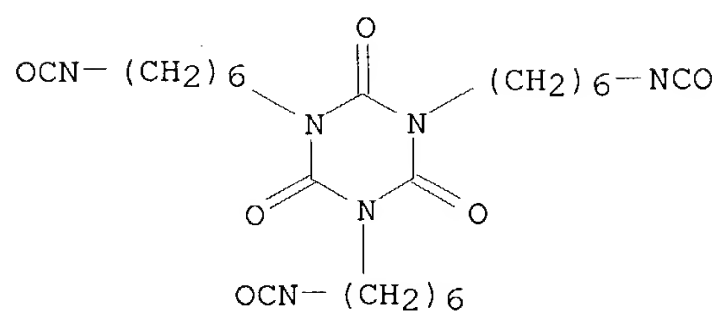


● Na

CM 2

CRN 3779-63-3

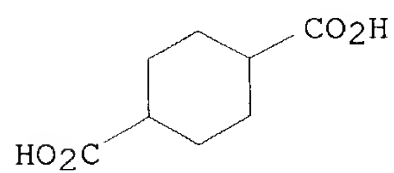
CMF C24 H36 N6 O6



CM 3

CRN 1076-97-7

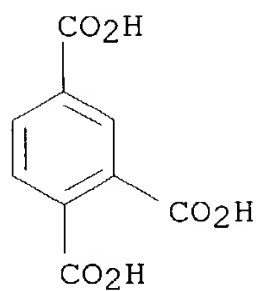
CMF C8 H12 O4



CM 4

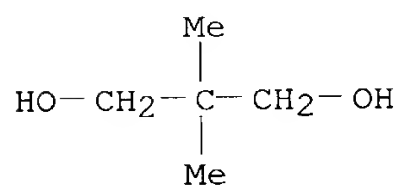
CRN 528-44-9

CMF C9 H6 O6



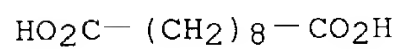
CM 5

CRN 126-30-7  
CMF C5 H12 O2



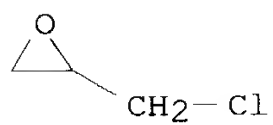
CM 6

CRN 111-20-6  
CMF C10 H18 O4



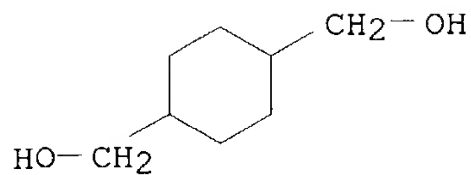
CM 7

CRN 106-89-8  
CMF C3 H5 Cl O



CM 8

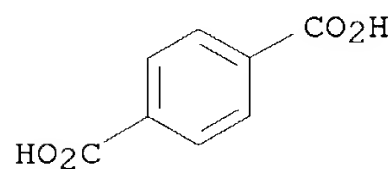
CRN 105-08-8  
CMF C8 H16 O2



CM 9

CRN 100-21-0

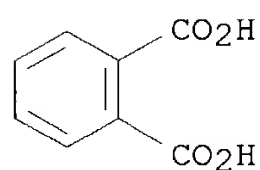
CMF C8 H6 O4



CM 10

CRN 88-99-3

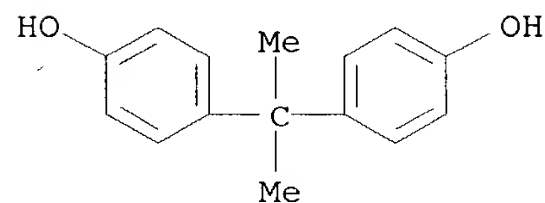
CMF C8 H6 O4



CM 11

CRN 80-05-7

CMF C15 H16 O2



L56 ANSWER 6 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN  
 AN 2002:400360 HCAPLUS  
 DN 136:402843  
 TI Fire-resistant polymer compositions and their laminates  
 IN Togawa, Keiichiro; Hattori, Takahiro; Tajika, Hiroshi  
 PA Toyobo Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 20 pp.  
 CODEN: JKXXAF  
 DT Patent

LA Japanese

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2002155210	A2	20020528	JP 2001-137745	20010508
PRAI	JP 2000-270243	A	20000906		
	JP 2000-270244	A	20000906		
OS	MARPAT 136:402843				
AB	The compns. contain organic polymers and halogen-free fireproofing agents bearing N-containing cyclic structures. Thus, a composition containing 65 parts isophthalic acid-1,4-cyclohexanedicarboxylic acid-sodium 5-sulfoisophthalate-neopentyl glycol-1,6-hexanediol copolymer and 35 parts melamine phosphate was applied on a PET <b>film</b> (E 5000) and dried to give an adhesive <b>film</b> showing fire resistance (UL 94 test) V-0 and good interlayer adhesion before and after soaking in boiling <b>water</b> for 1 h.				
IC	ICM C08L101-00				
	ICS B32B027-18; C08K005-3492; C08K005-5353				
CC	38-3 (Plastics Fabrication and Uses) Section cross-reference(s): 37				
ST	polyester adhesive <b>film</b> fire resistance; melamine phosphate fireproofing agent adhesive <b>film</b> ; <b>water</b> resistance polyester adhesive <b>film</b> ; halogen free fireproofing polyester adhesive <b>film</b>				
IT	Polyesters, uses RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (acrylic; fire-resistant polymer compns. for adhesive <b>films</b> with good <b>water</b> resistance)				
IT	Polyesters, uses RL: TEM (Technical or engineered material use); USES (Uses) (base <b>films</b> ; fire-resistant polymer compns. for adhesive <b>films</b> with good <b>water</b> resistance)				
IT	Polyesters, uses RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (epoxy, acrylic; fire-resistant polymer compns. for adhesive <b>films</b> with good <b>water</b> resistance)				
IT	Polyesters, uses RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (epoxy; fire-resistant polymer compns. for adhesive <b>films</b> with good <b>water</b> resistance)				
IT	Adhesive <b>films</b> (fire-resistant polymer compns. for adhesive <b>films</b> with good <b>water</b> resistance)				
IT	Polyesters, uses RL: IMF (Industrial manufacture); POF (Polymer in formulation); RCT (Reactant); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses) (fire-resistant polymer compns. for adhesive <b>films</b> with good <b>water</b> resistance)				
IT	Acrylic polymers, uses RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses) (fire-resistant polymer compns. for adhesive <b>films</b> with good <b>water</b> resistance)				



- IT **Water**-resistant materials  
(fire-resistant; fire-resistant polymer compns. for adhesive  
**films** with good **water** resistance)
- IT Fireproofing agents  
(halogen-free; fire-resistant polymer compns. for adhesive  
**films** with good **water** resistance)
- IT Epoxy resins, uses  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM  
(Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polyester-, acrylic; fire-resistant polymer compns. for adhesive  
**films** with good **water** resistance)
- IT Polyurethanes, uses  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM  
(Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polyester-, block; fire-resistant polymer compns. for adhesive  
**films** with good **water** resistance)
- IT Epoxy resins, uses  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM  
(Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polyester-; fire-resistant polymer compns. for adhesive **films**  
with good **water** resistance)
- IT Fire-resistant materials  
(**water**-resistant; fire-resistant polymer compns. for adhesive  
**films** with good **water** resistance)
- IT 138507-04-7, JPCN 300M  
RL: MOA (Modifier or additive use); TEM (Technical or engineered material  
use); USES (Uses)  
(JPCN 300M, fireproofing agent; fire-resistant polymer compns. for  
adhesive **films** with good **water** resistance)
- IT 149316-32-5, PM 210  
RL: TEM (Technical or engineered material use); USES (Uses)  
(adhesive layers; fire-resistant polymer compns. for adhesive  
**films** with good **water** resistance)
- IT 25038-59-9, E 5000, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(base **films**; fire-resistant polymer compns. for adhesive  
**films** with good **water** resistance)
- IT 405873-51-0P, 1,4-Cyclohexanedicarboxylic acid-1,4-cyclohexanedimethanol-  
Cymel 254-neopentyl glycol-phthalic acid-sebacic acid-sodium  
5-sulfoisophthalate-terephthalic acid-trimellitic acid copolymer  
405873-52-1P, Coronate HX-ethylene glycol-isophthalic acid-neopentyl  
glycol-sodium 5-sulfoisophthalate-terephthalic acid-trimellitic acid  
copolymer 405873-53-2P, Coronate HX-1,6-hexanediol-isophthalic  
acid-neopentyl glycol-terephthalic acid-trimellitic acid copolymer  
**405873-61-2P**, 1,4-Cyclohexanedicarboxylic acid-1,4-  
cyclohexanedimethanol-Epikote 1004-ethyl acrylate-fumaric acid-isophthalic  
acid-neopentyl glycol-sodium 5-sulfoisophthalate copolymer 405873-62-3P,  
Coronate HX-1,4-cyclohexanedicarboxylic acid-1,4-cyclohexanedimethanol-  
ethyl acrylate-fumaric acid-methacrylic acid-neopentyl glycol-sebacic  
acid-sodium 5-sulfoisophthalate copolymer 430439-85-3P, Coronate  
HX-1,4-cyclohexanedicarboxylic acid-1,4-cyclohexanedimethanol-neopentyl  
glycol-phthalic acid-sebacic acid-sodium 5-sulfoisophthalate-terephthalic  
acid-trimellitic acid copolymer **430439-86-4P**,  
1,4-Cyclohexanedicarboxylic acid-1,4-cyclohexanedimethanol-HDI  
isocyanurate-neopentyl glycol-phthalic acid-sebacic acid-sodium  
5-sulfoisophthalate-terephthalic acid-trimellitic acid copolymer  
**430439-87-5P**, HDI isocyanurate-1,6-hexanediol-isophthalic  
acid-neopentyl glycol-terephthalic acid-trimellitic acid copolymer

430439-88-6P, Coronate HX-Epikote 1004-ethylene glycol-isophthalic acid-neopentyl glycol-sodium 5-sulfoisophthalate-terephthalic acid-trimellitic acid copolymer **430439-89-7P**, Epikote 1004-ethylene glycol-HDI isocyanurate-isophthalic acid-neopentyl glycol-sodium 5-sulfoisophthalate-terephthalic acid-trimellitic acid copolymer **430439-90-0P**, Ethylene glycol-HDI isocyanurate-isophthalic acid-neopentyl glycol-sodium 5-sulfoisophthalate-terephthalic acid-trimellitic acid copolymer **430439-91-1P**,

1,4-Cyclohexanedicarboxylic acid-1,4-cyclohexanedimethanol-ethyl acrylate-fumaric acid-HDI isocyanurate-methacrylic acid-neopentyl glycol-sebacic acid-sodium 5-sulfoisophthalate copolymer

RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(**crosslinked**; fire-resistant polymer compns. for adhesive **films** with good **water** resistance)

IT 142518-39-6P 164154-23-8P, Ethylene glycol-isophthalic acid-neopentyl glycol-sodium 5-sulfoisophthalate-terephthalic acid-trimellitic acid copolymer 167360-08-9P, 1,4-Cyclohexanedicarboxylic acid-1,6-hexanediol-isophthalic acid-neopentyl glycol copolymer 340815-58-9P, 1,4-Cyclohexanedicarboxylic acid-1,4-cyclohexanedimethanol-ethyl acrylate-fumaric acid-isophthalic acid-neopentyl glycol copolymer 340815-59-0P, 1,4-Cyclohexanedicarboxylic acid-1,4-cyclohexanedimethanol-ethyl acrylate-fumaric acid-methacrylic acid-neopentyl glycol-sebacic acid-sodium 5-sulfoisophthalate copolymer 340830-38-8P, 1,4-Cyclohexanedicarboxylic acid-1,6-hexanediol-isophthalic acid-neopentyl glycol-sodium 5-sulfoisophthalate copolymer 405873-50-9P, 1,4-Cyclohexanedicarboxylic acid-1,4-cyclohexanedimethanol-neopentyl glycol-phthalic acid-sebacic acid-sodium 5-sulfoisophthalate-terephthalic acid-trimellitic acid copolymer 405873-63-4P, 1,4-Cyclohexanedicarboxylic acid-1,4-cyclohexanedimethanol-ethyl acrylate-fumaric acid-isophthalic acid-neopentyl glycol-sodium 5-sulfoisophthalate copolymer 405873-69-0P, 1,4-Cyclohexanedicarboxylic acid-1,4-cyclohexanedimethanol-neopentyl glycol-phthalic acid-sebacic acid-terephthalic acid-trimellitic acid copolymer 405873-76-9P, 1,4-Cyclohexanedicarboxylic acid-1,4-cyclohexanedimethanol-ethyl acrylate-fumaric acid-methacrylic acid-neopentyl glycol-sebacic acid copolymer

RL: IMF (Industrial manufacture); POF (Polymer in formulation); RCT (Reactant); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(fire-resistant polymer compns. for adhesive **films** with good **water** resistance)

IT 405873-55-4P, Coronate HX-1,4-Cyclohexanedicarboxylic acid-1,4-cyclohexanedimethanol-Epikote 1004-neopentyl glycol-phthalic acid-sebacic acid-sodium 5-sulfoisophthalate-terephthalic acid-trimellitic acid copolymer 405873-57-6P, Coronate HX-Epikote 1004-1,6-Hexanediol-isophthalic acid-neopentyl glycol-terephthalic acid-trimellitic acid copolymer **405873-60-1P**, 1,4-Cyclohexanedicarboxylic acid-1,4-cyclohexanedimethanol-hexamethylene diisocyanate-neopentyl glycol-phthalic acid-sebacic acid-sodium 5-sulfoisophthalate-terephthalic acid-trimellitic acid copolymer 405873-70-3P, 1,4-Cyclohexanedicarboxylic acid-1,4-cyclohexanedimethanol-Cymel 254-neopentyl glycol-phthalic acid-sebacic acid-terephthalic acid-trimellitic acid copolymer 405873-71-4P, Coronate HX-1,4-cyclohexanedicarboxylic acid-1,4-cyclohexanedimethanol-neopentyl glycol-phthalic acid-sebacic acid-terephthalic acid-trimellitic acid copolymer **405873-77-0P**, 1,4-Cyclohexanedicarboxylic acid-1,4-cyclohexanedimethanol-Epikote 1004-ethyl acrylate-fumaric acid-isophthalic acid-neopentyl glycol

copolymer 405873-78-1P, Coronate HX-1,4-cyclohexanedicarboxylic acid-1,4-cyclohexanedimethanol-ethyl acrylate-fumaric acid-methacrylic acid-neopentyl glycol-sebacic acid copolymer **430439-84-2P**, 1,4-Cyclohexanedicarboxylic acid-1,6-hexanediol-isophorone diisocyanate-isophthalic acid-neopentyl glycol-sodium 5-sulfoisophthalate block copolymer **430439-92-2P**, 1,4-Cyclohexanedicarboxylic acid-1,6-hexanediol-isophorone diisocyanate-isophthalic acid-neopentyl glycol block copolymer **430439-93-3P**, 1,4-Cyclohexanedicarboxylic acid-1,4-cyclohexanedimethanol-HDI-neopentyl glycol-orthophthalic acid-sebacic acid-terephthalic acid-trimellitic acid block copolymer **430439-94-4P**, 1,4-Cyclohexanedicarboxylic acid-1,4-cyclohexanedimethanol-HDI isocyanurate-neopentyl glycol-phthalic acid-sebacic acid-terephthalic acid-trimellitic acid copolymer **430439-95-5P**, 1,4-Cyclohexanedicarboxylic acid-1,4-cyclohexanedimethanol-ethyl acrylate-fumaric acid-HDI isocyanurate-methacrylic acid-neopentyl glycol-sebacic acid copolymer **430439-96-6P**, Epikote 1004-HDI isocyanurate-1,6-Hexanediol-isophthalic acid-neopentyl glycol-terephthalic acid-trimellitic acid copolymer **430439-97-7P**, 1,4-Cyclohexanedicarboxylic acid-1,4-cyclohexanedimethanol-Epikote 1004-HDI isocyanurate-neopentyl glycol-orthophthalic acid-sebacic acid-sodium 5-sulfoisophthalate-terephthalic acid-trimellitic acid copolymer  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (fire-resistant polymer compns. for adhesive **films** with good **water** resistance)

IT 58229-85-9, Paraloid B 44  
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
 (fire-resistant polymer compns. for adhesive **films** with good **water** resistance)

IT 41583-09-9, Melamine phosphate 212913-40-1, PMP 300 243144-78-7, PMP 100 380366-74-5, PMP 200 431897-25-5, HDDP-M  
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)  
 (fireproofing agents; fire-resistant polymer compns. for adhesive **films** with good **water** resistance)

IT **405873-61-2P**, 1,4-Cyclohexanedicarboxylic acid-1,4-cyclohexanedimethanol-Epikote 1004-ethyl acrylate-fumaric acid-isophthalic acid-neopentyl glycol-sodium 5-sulfoisophthalate copolymer **430439-86-4P**, 1,4-Cyclohexanedicarboxylic acid-1,4-cyclohexanedimethanol-HDI isocyanurate-neopentyl glycol-phthalic acid-sebacic acid-sodium 5-sulfoisophthalate-terephthalic acid-trimellitic acid copolymer **430439-87-5P**, HDI isocyanurate-1,6-hexanediol-isophthalic acid-neopentyl glycol-terephthalic acid-trimellitic acid copolymer **430439-89-7P**, Epikote 1004-ethylene glycol-HDI isocyanurate-isophthalic acid-neopentyl glycol-sodium 5-sulfoisophthalate-terephthalic acid-trimellitic acid copolymer **430439-90-0P**, Ethylene glycol-HDI isocyanurate-isophthalic acid-neopentyl glycol-sodium 5-sulfoisophthalate-terephthalic acid-trimellitic acid copolymer **430439-91-1P**, 1,4-Cyclohexanedicarboxylic acid-1,4-cyclohexanedimethanol-ethyl acrylate-fumaric acid-HDI isocyanurate-methacrylic acid-neopentyl glycol-sebacic acid-sodium 5-sulfoisophthalate copolymer  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (**crosslinked**; fire-resistant polymer compns. for adhesive **films** with good **water** resistance)

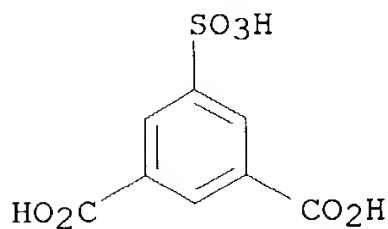
RN 405873-61-2 HCAPLUS

CN 1,3-Benzenedicarboxylic acid, 5-sulfo-, monosodium salt, polymer with  
1,3-benzenedicarboxylic acid, (2E)-2-butenedioic acid,  
(chloromethyl)oxirane, 1,4-cyclohexanedicarboxylic acid,  
1,4-cyclohexanedimethanol, 2,2-dimethyl-1,3-propanediol, ethyl  
2-propenoate and 4,4'-(1-methylethylidene)bis[phenol] (9CI) (CA INDEX  
NAME)

CM 1

CRN 6362-79-4

CMF C8 H6 O7 S . Na

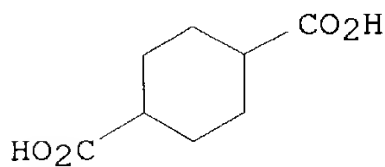


● Na

CM 2

CRN 1076-97-7

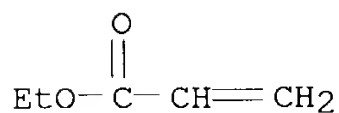
CMF C8 H12 O4



CM 3

CRN 140-88-5

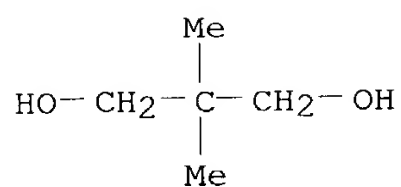
CMF C5 H8 O2



CM 4

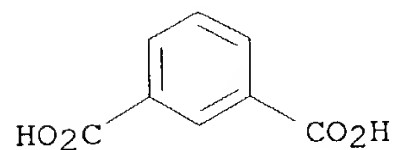
CRN 126-30-7

CMF C5 H12 O2



CM 5

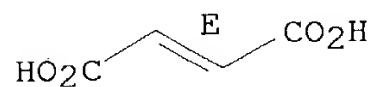
CRN 121-91-5  
CMF C8 H6 O4



CM 6

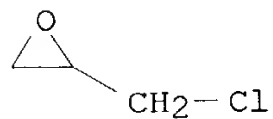
CRN 110-17-8  
CMF C4 H4 O4

Double bond geometry as shown.



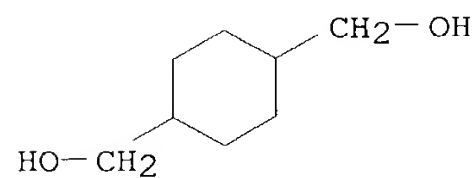
CM 7

CRN 106-89-8  
CMF C3 H5 Cl O



CM 8

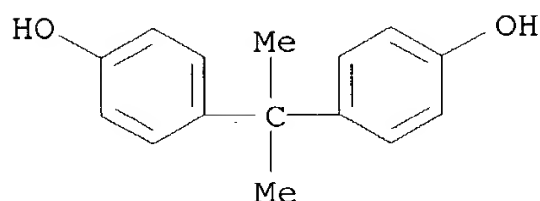
CRN 105-08-8  
CMF C8 H16 O2



CM 9

CRN 80-05-7

CMF C15 H16 O2



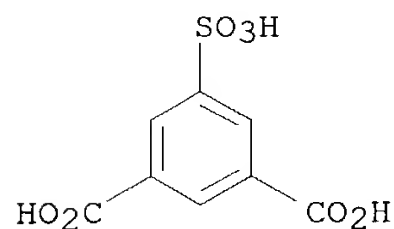
RN 430439-86-4 HCAPLUS

CN 1,2,4-Benzenetricarboxylic acid, polymer with 1,2-benzenedicarboxylic acid, 1,4-benzenedicarboxylic acid, 1,4-cyclohexanedicarboxylic acid, 1,4-cyclohexanedimethanol, decanedioic acid, 2,2-dimethyl-1,3-propanediol, 5-sulfo-1,3-benzenedicarboxylic acid monosodium salt and 1,3,5-tris(6-isocyanatohexyl)-1,3,5-triazine-2,4,6(1H,3H,5H)-trione (9CI) (CA INDEX NAME)

CM 1

CRN 6362-79-4

CMF C8 H6 O7 S . Na

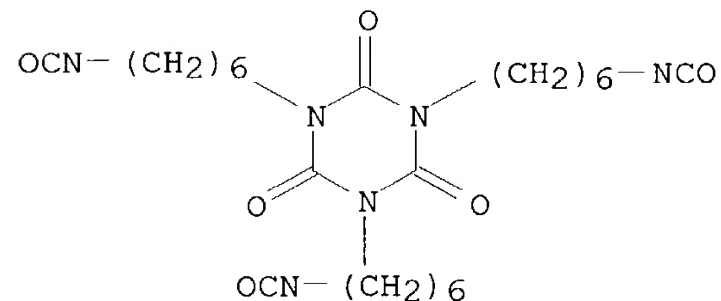


● Na

CM 2

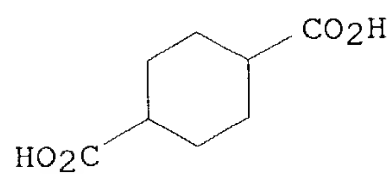
CRN 3779-63-3

CMF C24 H36 N6 O6



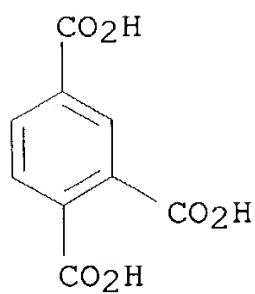
CM 3

CRN 1076-97-7  
CMF C8 H12 O4



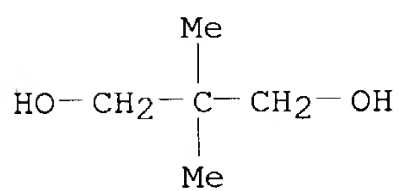
CM 4

CRN 528-44-9  
CMF C9 H6 O6



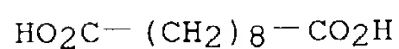
CM 5

CRN 126-30-7  
CMF C5 H12 O2



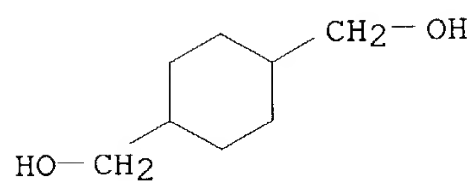
CM 6

CRN 111-20-6  
CMF C10 H18 O4



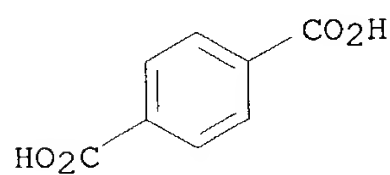
CM 7

CRN 105-08-8  
CMF C8 H16 O2



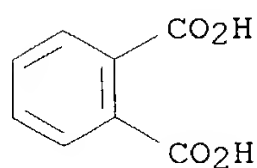
CM 8

CRN 100-21-0  
CMF C8 H6 O4



CM 9

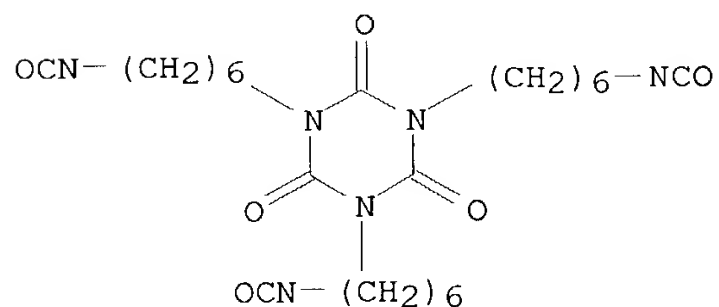
CRN 88-99-3  
CMF C8 H6 O4



RN 430439-87-5 HCAPLUS  
CN 1,2,4-Benzenetricarboxylic acid, polymer with 1,3-benzenedicarboxylic acid, 1,4-benzenedicarboxylic acid, 2,2-dimethyl-1,3-propanediol, 1,6-hexanediol and 1,3,5-tris(6-isocyanatohexyl)-1,3,5-triazine-2,4,6(1H,3H,5H)-trione (9CI) (CA INDEX NAME)

CM 1

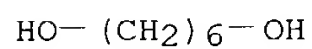
CRN 3779-63-3  
CMF C24 H36 N6 O6





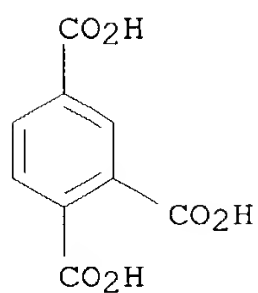
CM 2

CRN 629-11-8  
CMF C6 H14 O2



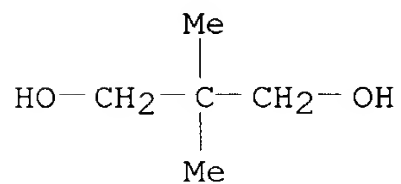
CM 3

CRN 528-44-9  
CMF C9 H6 O6



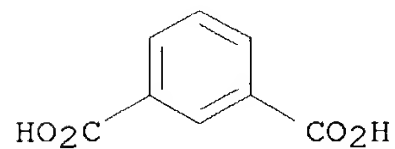
CM 4

CRN 126-30-7  
CMF C5 H12 O2



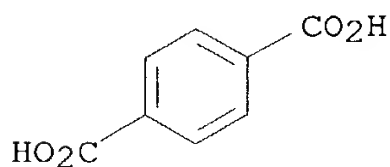
CM 5

CRN 121-91-5  
CMF C8 H6 O4



CM 6

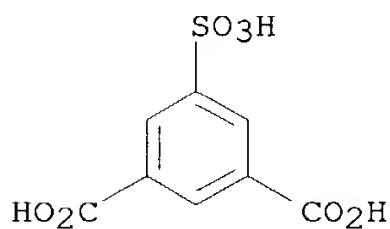
CRN 100-21-0  
CMF C8 H6 O4



RN 430439-89-7 HCAPLUS  
 CN 1,2,4-Benzenetricarboxylic acid, polymer with 1,3-benzenedicarboxylic acid, 1,4-benzenedicarboxylic acid, (chloromethyl)oxirane, 2,2-dimethyl-1,3-propanediol, 1,2-ethanediol, 4,4'-(1-methylethylidene)bis[phenol], 5-sulfo-1,3-benzenedicarboxylic acid monosodium salt and 1,3,5-tris(6-isocyanatohexyl)-1,3,5-triazine-2,4,6(1H,3H,5H)-trione (9CI) (CA INDEX NAME)

CM 1

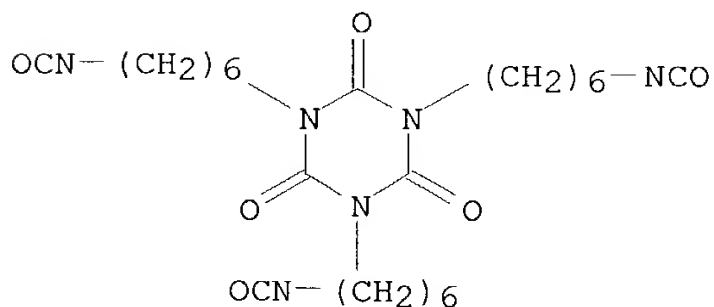
CRN 6362-79-4  
 CMF C8 H6 O7 S . Na



● Na

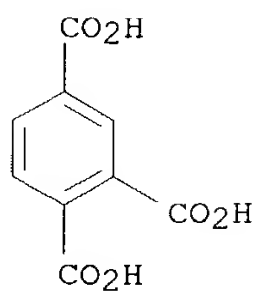
CM 2

CRN 3779-63-3  
 CMF C24 H36 N6 O6



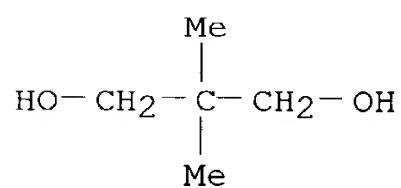
CM 3

CRN 528-44-9  
 CMF C9 H6 O6



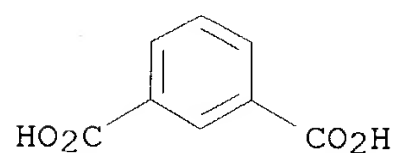
CM 4

CRN 126-30-7  
CMF C5 H12 O2



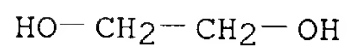
CM 5

CRN 121-91-5  
CMF C8 H6 O4



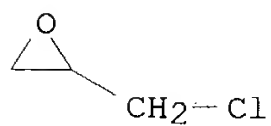
CM 6

CRN 107-21-1  
CMF C2 H6 O2



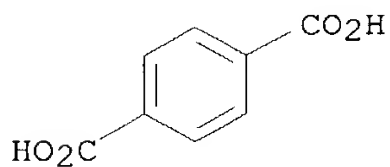
CM 7

CRN 106-89-8  
CMF C3 H5 Cl O



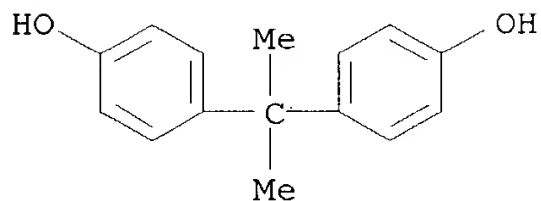
CM 8

CRN 100-21-0  
CMF C8 H6 O4



CM 9

CRN 80-05-7  
CMF C15 H16 O2

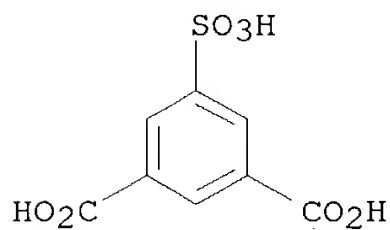


RN 430439-90-0 HCAPLUS

CN 1,2,4-Benzenetricarboxylic acid, polymer with 1,3-benzenedicarboxylic acid, 1,4-benzenedicarboxylic acid, 2,2-dimethyl-1,3-propanediol, 1,2-ethanediol, 5-sulfo-1,3-benzenedicarboxylic acid monosodium salt and 1,3,5-tris(6-isocyanatohexyl)-1,3,5-triazine-2,4,6(1H,3H,5H)-trione (9CI) (CA INDEX NAME)

CM 1

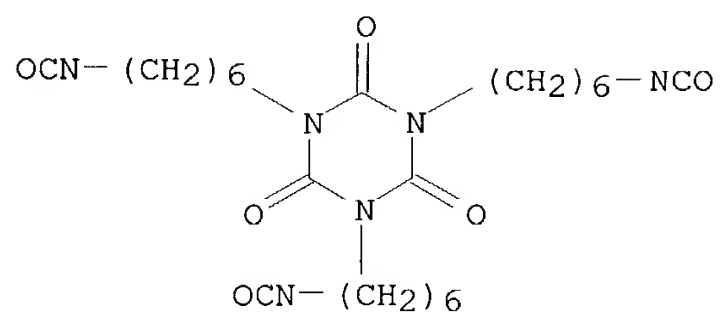
CRN 6362-79-4  
CMF C8 H6 O7 S . Na



● Na

CM 2

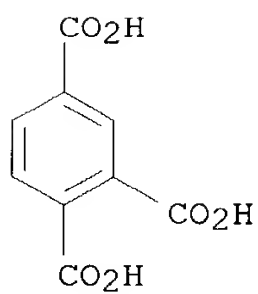
CRN 3779-63-3  
CMF C24 H36 N6 O6



CM 3

CRN 528-44-9

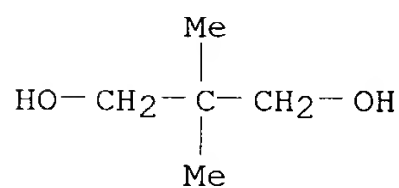
CMF C9 H6 O6



CM 4

CRN 126-30-7

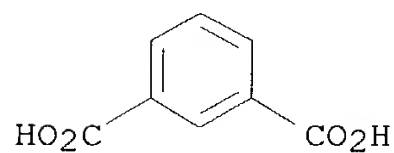
CMF C5 H12 O2



CM 5

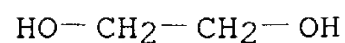
CRN 121-91-5

CMF C8 H6 O4



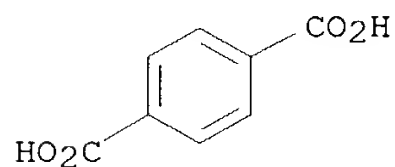
CM 6

CRN 107-21-1  
CMF C2 H6 O2



CM 7

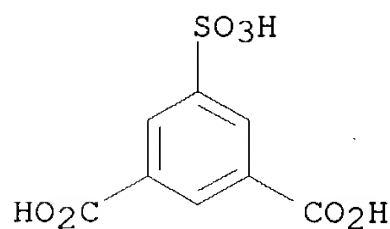
CRN 100-21-0  
CMF C8 H6 O4



RN 430439-91-1 HCAPLUS  
CN 1,3-Benzenedicarboxylic acid, 5-sulfo-, monosodium salt, polymer with (2E)-2-butenedioic acid, 1,4-cyclohexanedicarboxylic acid, 1,4-cyclohexanedimethanol, decanedioic acid, 2,2-dimethyl-1,3-propanediol, ethyl 2-propenoate, 2-methyl-2-propenoic acid and 1,3,5-tris(6-isocyanatohexyl)-1,3,5-triazine-2,4,6(1H,3H,5H)-trione (9CI) (CA INDEX NAME)

CM 1

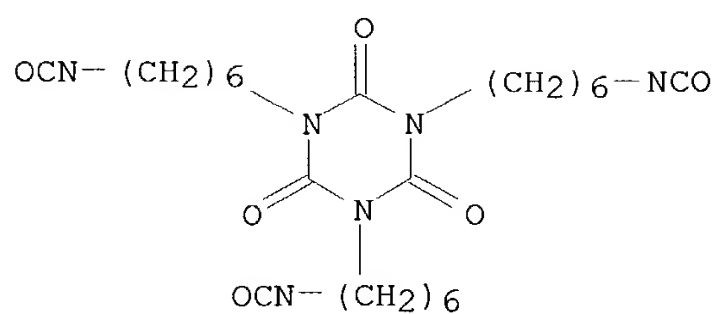
CRN 6362-79-4  
CMF C8 H6 O7 S . Na



● Na

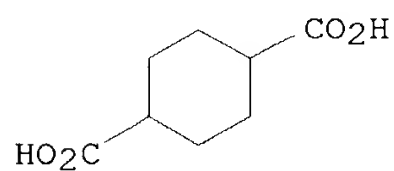
CM 2

CRN 3779-63-3  
CMF C24 H36 N6 O6



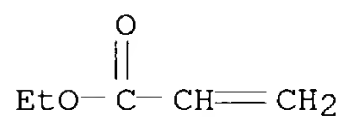
CM 3

CRN 1076-97-7  
CMF C8 H12 O4



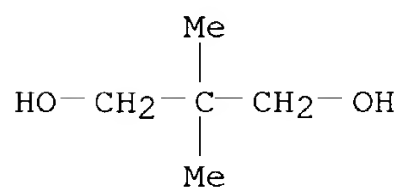
CM 4

CRN 140-88-5  
CMF C5 H8 O2



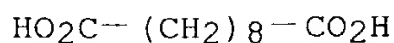
CM 5

CRN 126-30-7  
CMF C5 H12 O2



CM 6

CRN 111-20-6  
CMF C10 H18 O4

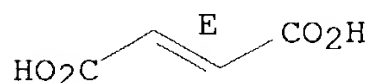


CM 7

CRN 110-17-8

CMF C4 H4 O4

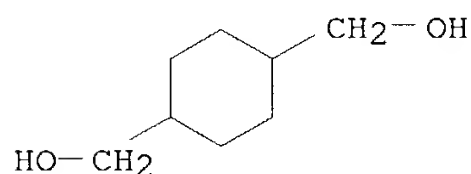
Double bond geometry as shown.



CM 8

CRN 105-08-8

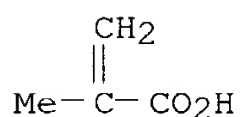
CMF C8 H16 O2



CM 9

CRN 79-41-4

CMF C4 H6 O2



IT **405873-60-1P**, 1,4-Cyclohexanedicarboxylic acid-1,4-cyclohexanedimethanol-hexamethylene diisocyanate-neopentyl glycol-phthalic acid-sebacic acid-sodium 5-sulfoisophthalate-terephthalic acid-trimellitic acid copolymer **405873-77-0P**, 1,4-Cyclohexanedicarboxylic acid-1,4-cyclohexanedimethanol-Epikote 1004-ethyl acrylate-fumaric acid-isophthalic acid-neopentyl glycol copolymer **430439-84-2P**, 1,4-Cyclohexanedicarboxylic acid-1,6-hexanediol-isophorone diisocyanate-isophthalic acid-neopentyl glycol-sodium 5-sulfoisophthalate block copolymer **430439-92-2P**, 1,4-Cyclohexanedicarboxylic acid-1,6-hexanediol-isophorone diisocyanate-isophthalic acid-neopentyl glycol block copolymer **430439-93-3P**, 1,4-Cyclohexanedicarboxylic acid-1,4-cyclohexanedimethanol-HDI-neopentyl glycol-orthophthalic acid-sebacic acid-terephthalic acid-trimellitic acid block copolymer **430439-94-4P**, 1,4-Cyclohexanedicarboxylic acid-1,4-cyclohexanedimethanol-HDI isocyanurate-neopentyl glycol-phthalic acid-sebacic acid-terephthalic acid-trimellitic acid copolymer



**430439-95-5P**, 1,4-Cyclohexanedicarboxylic acid-1,4-cyclohexanedimethanol-ethyl acrylate-fumaric acid-HDI isocyanurate-methacrylic acid-neopentyl glycol-sebacic acid copolymer

**430439-96-6P**, Epikote 1004-HDI isocyanurate-1,6-Hexanediol-isophthalic acid-neopentyl glycol-terephthalic acid-trimellitic acid copolymer **430439-97-7P**, 1,4-Cyclohexanedicarboxylic acid-1,4-cyclohexanedimethanol-Epikote 1004-HDI isocyanurate-neopentyl glycol-orthophthalic acid-sebacic acid-sodium 5-sulfoisophthalate-terephthalic acid-trimellitic acid copolymer

RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (fire-resistant polymer compns. for adhesive **films** with good **water** resistance)

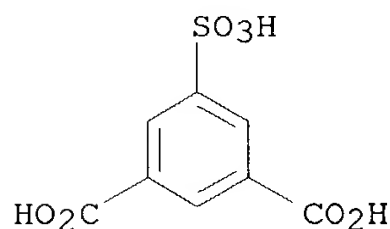
RN 405873-60-1 HCAPLUS

CN 1,2,4-Benzenetricarboxylic acid, polymer with 1,2-benzenedicarboxylic acid, 1,4-benzenedicarboxylic acid, 1,4-cyclohexanedicarboxylic acid, 1,4-cyclohexanedimethanol, decanedioic acid, 1,6-diisocyanatohexane, 2,2-dimethyl-1,3-propanediol and 5-sulfo-1,3-benzenedicarboxylic acid monosodium salt (9CI) (CA INDEX NAME)

CM 1

CRN 6362-79-4

CMF C8 H6 O7 S . Na

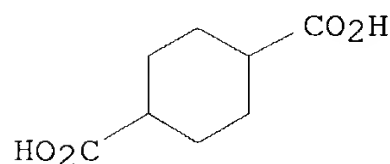


● Na

CM 2

CRN 1076-97-7

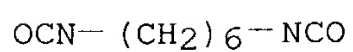
CMF C8 H12 O4



CM 3

CRN 822-06-0

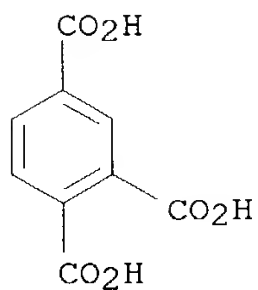
CMF C8 H12 N2 O2



CM 4

CRN 528-44-9

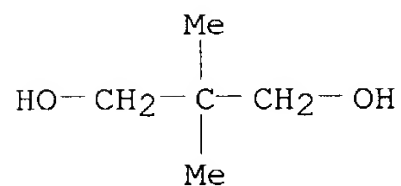
CMF C9 H6 O6



CM 5

CRN 126-30-7

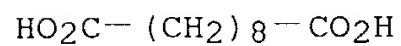
CMF C5 H12 O2



CM 6

CRN 111-20-6

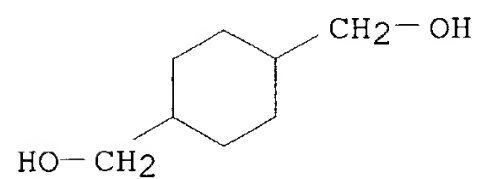
CMF C10 H18 O4



CM 7

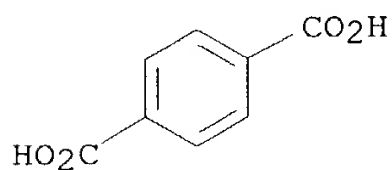
CRN 105-08-8

CMF C8 H16 O2



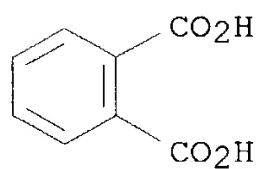
CM 8

CRN 100-21-0  
CMF C8 H6 O4



CM 9

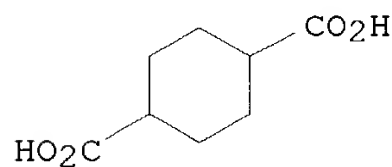
CRN 88-99-3  
CMF C8 H6 O4



RN 405873-77-0 HCAPLUS  
CN 1,3-Benzenedicarboxylic acid, polymer with (2E)-2-butenedioic acid, (chloromethyl)oxirane, 1,4-cyclohexanedicarboxylic acid, 1,4-cyclohexanedimethanol, 2,2-dimethyl-1,3-propanediol, ethyl 2-propenoate and 4,4'-(1-methylethylidene)bis[phenol] (9CI) (CA INDEX NAME)

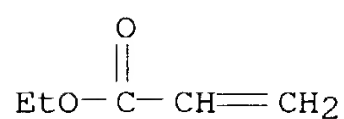
CM 1

CRN 1076-97-7  
CMF C8 H12 O4



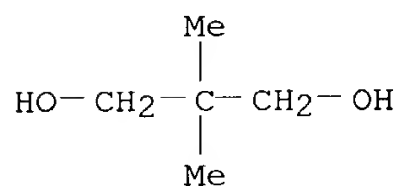
CM 2

CRN 140-88-5  
CMF C5 H8 O2



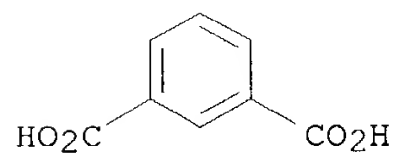
CM 3

CRN 126-30-7  
CMF C5 H12 O2



CM 4

CRN 121-91-5  
CMF C8 H6 O4



CM 5

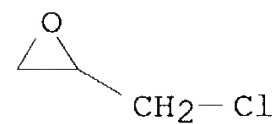
CRN 110-17-8  
CMF C4 H4 O4

Double bond geometry as shown.



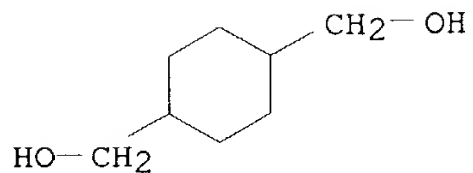
CM 6

CRN 106-89-8  
CMF C3 H5 Cl O



CM 7

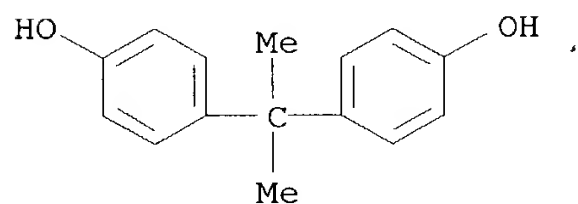
CRN 105-08-8  
CMF C8 H16 O2



CM 8

CRN 80-05-7

CMF C15 H16 O2



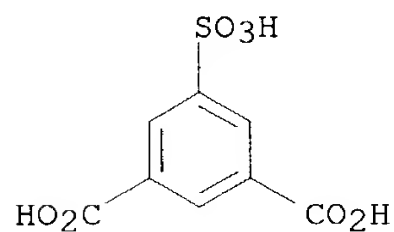
RN 430439-84-2 HCAPLUS

CN 1,3-Benzenedicarboxylic acid, 5-sulfo-, monosodium salt, polymer with 1,3-benzenedicarboxylic acid, 1,4-cyclohexanedicarboxylic acid, 2,2-dimethyl-1,3-propanediol, 1,6-hexanediol and 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane, block (9CI) (CA INDEX NAME)

CM 1

CRN 6362-79-4

CMF C8 H6 O7 S . Na

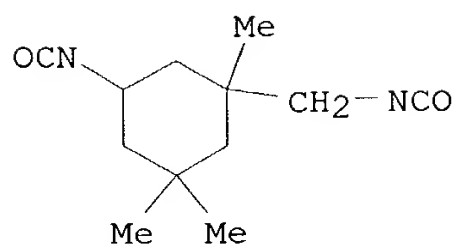


● Na

CM 2

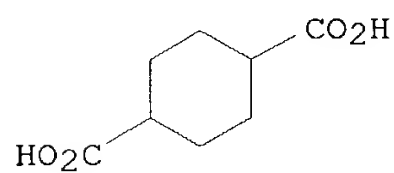
CRN 4098-71-9

CMF C12 H18 N2 O2



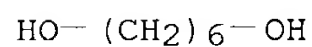
CM 3

CRN 1076-97-7  
CMF C8 H12 O4



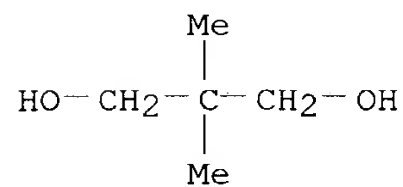
CM 4

CRN 629-11-8  
CMF C6 H14 O2



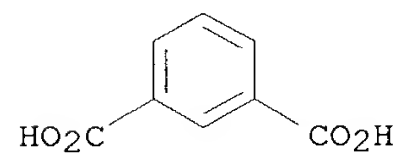
CM 5

CRN 126-30-7  
CMF C5 H12 O2



CM 6

CRN 121-91-5  
CMF C8 H6 O4



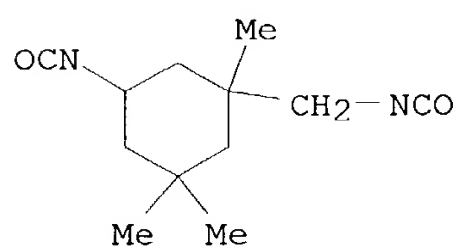
RN 430439-92-2 HCAPLUS

CN 1,3-Benzenedicarboxylic acid, polymer with 1,4-cyclohexanedicarboxylic acid, 2,2-dimethyl-1,3-propanediol, 1,6-hexanediol and 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane, block (9CI) (CA INDEX NAME)

CM 1

CRN 4098-71-9

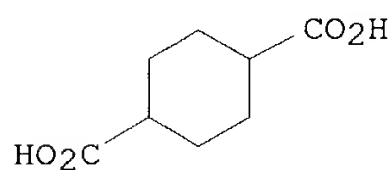
CMF C12 H18 N2 O2



CM 2

CRN 1076-97-7

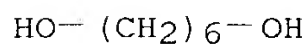
CMF C8 H12 O4



CM 3

CRN 629-11-8

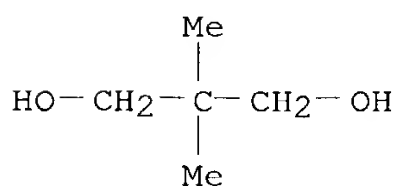
CMF C6 H14 O2



CM 4

CRN 126-30-7

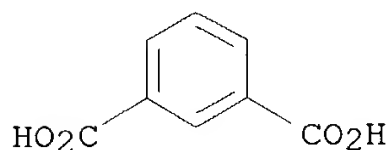
CMF C5 H12 O2



CM 5

CRN 121-91-5

CMF C8 H6 O4



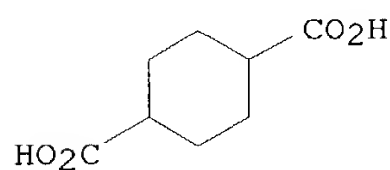
RN 430439-93-3 HCAPLUS

CN 1,2,4-Benzenetricarboxylic acid, polymer with 1,2-benzenedicarboxylic acid, 1,4-benzenedicarboxylic acid, 1,4-cyclohexanedicarboxylic acid, 1,4-cyclohexanedimethanol, decanedioic acid, 1,6-diisocyanatohexane and 2,2-dimethyl-1,3-propanediol, block (9CI) (CA INDEX NAME)

CM 1

CRN 1076-97-7

CMF C8 H12 O4



CM 2

CRN 822-06-0

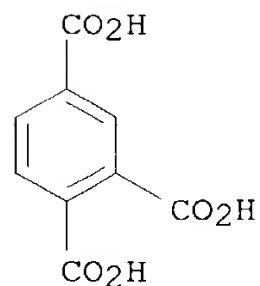
CMF C8 H12 N2 O2

OCN-(CH<sub>2</sub>)<sub>6</sub>-NCO

CM 3

CRN 528-44-9

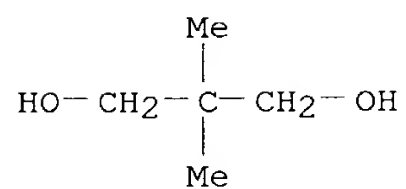
CMF C9 H6 O6





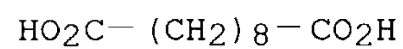
CM 4

CRN 126-30-7  
CMF C5 H12 O2



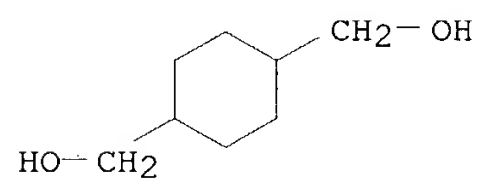
CM 5

CRN 111-20-6  
CMF C10 H18 O4



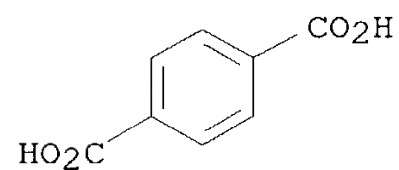
CM 6

CRN 105-08-8  
CMF C8 H16 O2



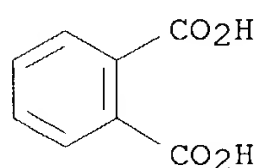
CM 7

CRN 100-21-0  
CMF C8 H6 O4



CM 8

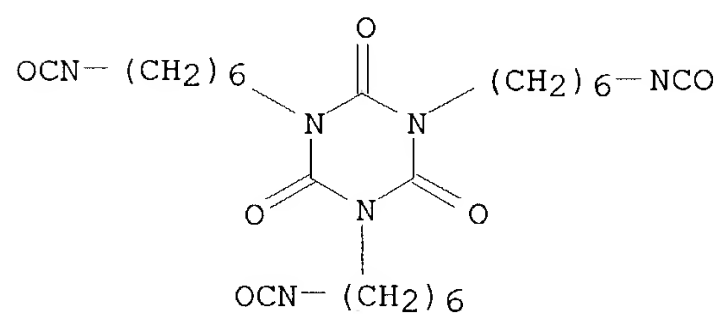
CRN 88-99-3  
CMF C8 H6 O4



RN 430439-94-4 HCAPLUS  
 CN 1,2,4-Benzenetricarboxylic acid, polymer with 1,2-benzenedicarboxylic acid, 1,4-benzenedicarboxylic acid, 1,4-cyclohexanedicarboxylic acid, 1,4-cyclohexanedimethanol, decanedioic acid, 2,2-dimethyl-1,3-propanediol and 1,3,5-tris(6-isocyanatohexyl)-1,3,5-triazine-2,4,6(1H,3H,5H)-trione (9CI) (CA INDEX NAME)

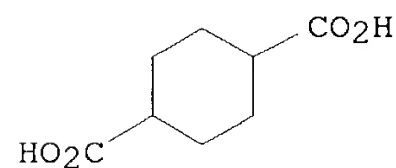
CM 1

CRN 3779-63-3  
 CMF C24 H36 N6 O6



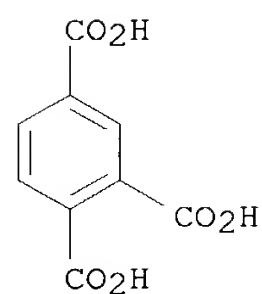
CM 2

CRN 1076-97-7  
 CMF C8 H12 O4



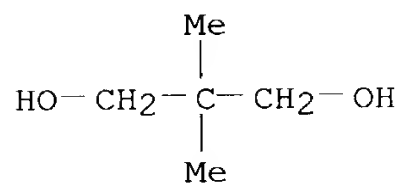
CM 3

CRN 528-44-9  
 CMF C9 H6 O6



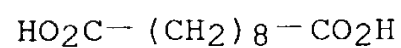
CM 4

CRN 126-30-7  
CMF C5 H12 O2



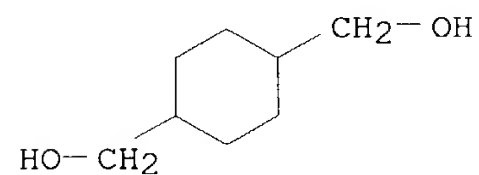
CM 5

CRN 111-20-6  
CMF C10 H18 O4



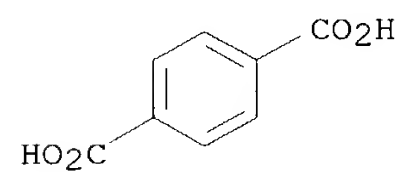
CM 6

CRN 105-08-8  
CMF C8 H16 O2



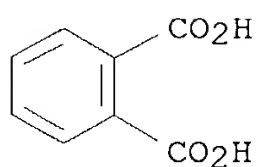
CM 7

CRN 100-21-0  
CMF C8 H6 O4



CM 8

CRN 88-99-3  
CMF C8 H6 O4



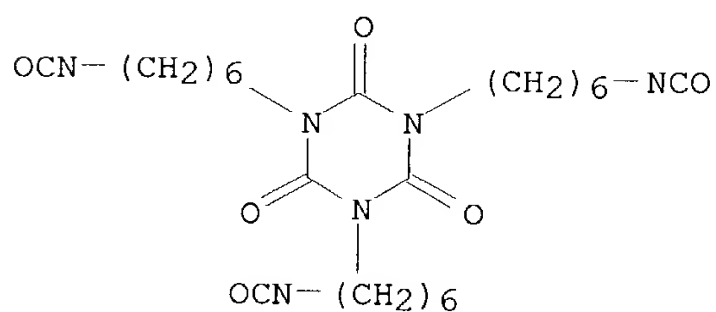
RN 430439-95-5 HCAPLUS

CN 1,4-Cyclohexanedicarboxylic acid, polymer with (2E)-2-butenedioic acid, 1,4-cyclohexanedimethanol, decanedioic acid, 2,2-dimethyl-1,3-propanediol, ethyl 2-propenoate, 2-methyl-2-propenoic acid and 1,3,5-tris(6-isocyanatohexyl)-1,3,5-triazine-2,4,6(1H,3H,5H)-trione (9CI) (CA INDEX NAME)

CM 1

CRN 3779-63-3

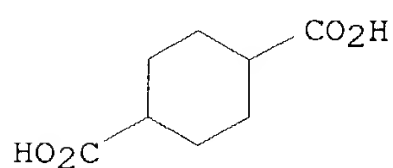
CMF C24 H36 N6 O6



CM 2

CRN 1076-97-7

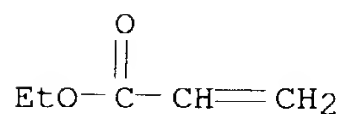
CMF C8 H12 O4



CM 3

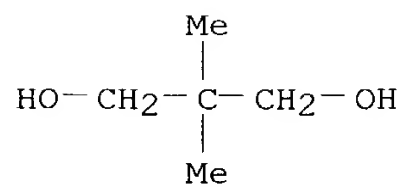
CRN 140-88-5

CMF C5 H8 O2



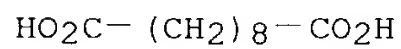
CM 4

CRN 126-30-7  
CMF C5 H12 O2



CM 5

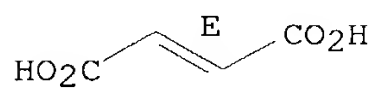
CRN 111-20-6  
CMF C10 H18 O4



CM 6

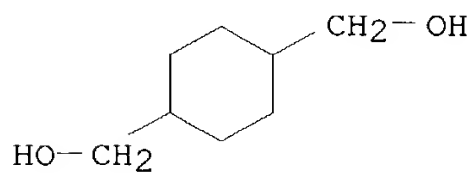
CRN 110-17-8  
CMF C4 H4 O4

Double bond geometry as shown.



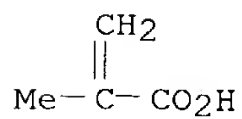
CM 7

CRN 105-08-8  
CMF C8 H16 O2



CM 8

CRN 79-41-4  
CMF C4 H6 O2



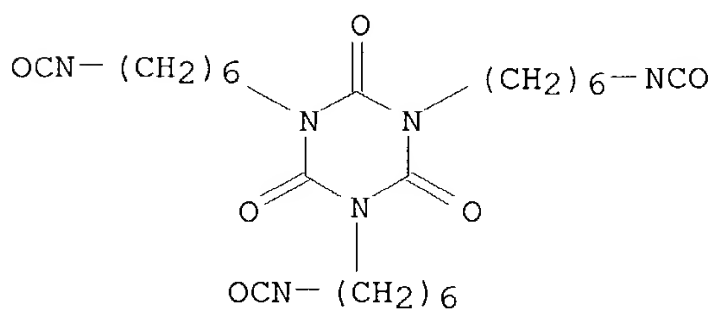
RN 430439-96-6 HCAPLUS

CN 1,2,4-Benzenetricarboxylic acid, polymer with 1,3-benzenedicarboxylic acid, 1,4-benzenedicarboxylic acid, (chloromethyl)oxirane, 2,2-dimethyl-1,3-propanediol, 1,6-hexanediol, 4,4'-(1-methylethylidene)bis[phenol] and 1,3,5-tris(6-isocyanatohexyl)-1,3,5-triazine-2,4,6(1H,3H,5H)-trione (9CI) (CA INDEX NAME)

CM 1

CRN 3779-63-3

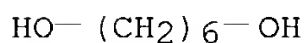
CMF C24 H36 N6 O6



CM 2

CRN 629-11-8

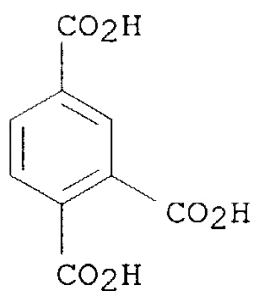
CMF C6 H14 O2



CM 3

CRN 528-44-9

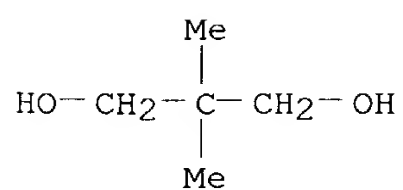
CMF C9 H6 O6



CM 4

CRN 126-30-7

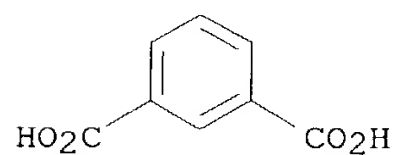
CMF C5 H12 O2



CM 5

CRN 121-91-5

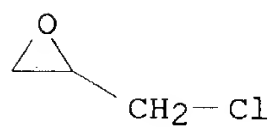
CMF C8 H6 O4



CM 6

CRN 106-89-8

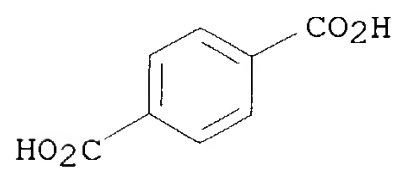
CMF C3 H5 Cl O



CM 7

CRN 100-21-0

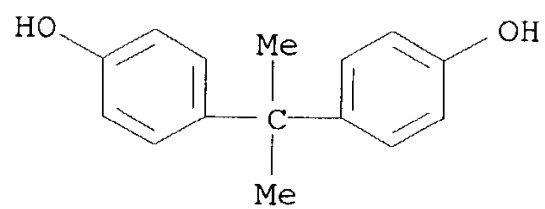
CMF C8 H6 O4



CM 8

CRN 80-05-7

CMF C15 H16 O2



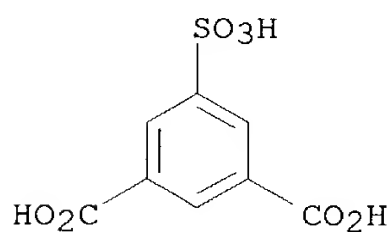
RN 430439-97-7 HCAPLUS

CN 1,2,4-Benzenetricarboxylic acid, polymer with 1,2-benzenedicarboxylic acid, 1,4-benzenedicarboxylic acid, (chloromethyl)oxirane, 1,4-cyclohexanedicarboxylic acid, 1,4-cyclohexanedimethanol, decanedioic acid, 2,2-dimethyl-1,3-propanediol, 4,4'-(1-methylethylidene)bis[phenol], 5-sulfo-1,3-benzenedicarboxylic acid sodium salt and 1,3,5-tris(6-isocyanatohexyl)-1,3,5-triazine-2,4,6(1H,3H,5H)-trione (9CI) (CA INDEX NAME)

CM 1

CRN 6362-79-4

CMF C8 H6 O7 S . Na

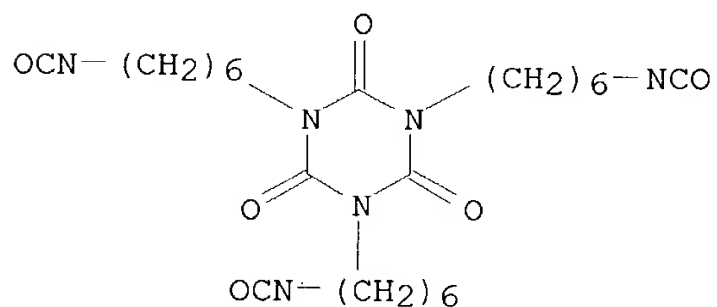


● Na

CM 2

CRN 3779-63-3

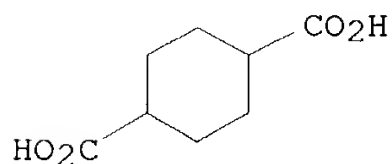
CMF C24 H36 N6 O6



CM 3

CRN 1076-97-7

CMF C8 H12 O4

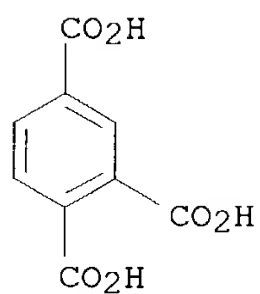




CM 4

CRN 528-44-9

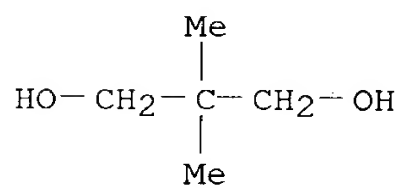
CMF C9 H6 O6



CM 5

CRN 126-30-7

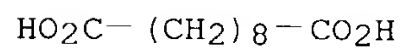
CMF C5 H12 O2



CM 6

CRN 111-20-6

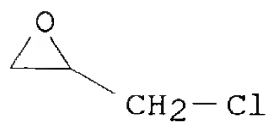
CMF C10 H18 O4



CM 7

CRN 106-89-8

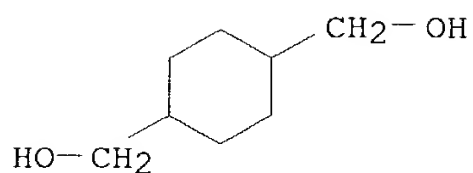
CMF C3 H5 Cl O



CM 8

CRN 105-08-8

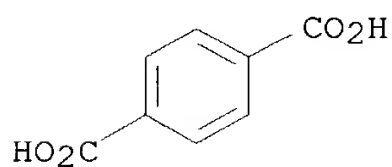
CMF C8 H16 O2



CM 9

CRN 100-21-0

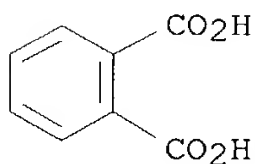
CMF C8 H6 O4



CM 10

CRN 88-99-3

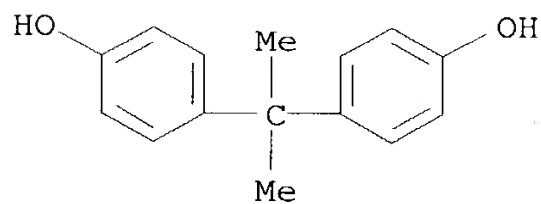
CMF C8 H6 O4



CM 11

CRN 80-05-7

CMF C15 H16 O2



L56 ANSWER 7 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2002:332247 HCAPLUS

DN 136:356475

TI Photoactivatable **waterborne coating** compositions  
containing **acrylic polyurethane** polymers

IN Van den Berg, Keimpe Jan; Noomen, Arie; Rous, Frederik; Rood, Ignace  
Damiaan Christiaan; Andringa, Heert; Kruithof, Klaas Jan Hendrik; Lindell  
Kjellqvist, Ann Kerstin Birgitta

KATHLEEN FULLER EIC 1700 REMSEN 4B28 571/272-2505

PA Akzo Nobel N.V., Neth.  
 SO PCT Int. Appl., 41 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002034808	A1	20020502	WO 2001-EP12421	20011025
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
	RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
	AU 2002010574	A5	20020506	AU 2002-10574	20011025
	US 2002156145	A1	20021024	US 2001-45272	20011025
	EP 1328565	A1	20030723	EP 2001-978461	20011025
	R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR			
PRAI	EP 2000-203722	A	20001025		
	WO 2001-EP12421	W	20011025		

AB The **coating** compns. comprise: (A) a (meth)**acryloyl**-functional polyurethane dispersion, with the (meth)**acryloyl**-functional polyurethane comprising 5-18% of alkylene oxide groups while the (meth)**acryloyl**-functionality is in the range of 2-40, and (B) UV-initiator. Preferably, the A comprises 8-18% of alkylene oxide groups. More preferably, the **coating** compns. comprise a reactive diluent. The A is obtainable by reaction of: (a)  $\geq 1$  organic polyisocyanate, (b) optionally,  $\geq 1$  organic compound containing  $\geq 2$  isocyanate-reactive groups and having a number-average mol. weight (Mn) in the range

of 400 to 6000. (c)  $\geq 1$  isocyanate-reactive and/or isocyanate-functional compound bearing nonionic dispersing groups, (d)  $\geq 1$  isocyanate-reactive (meth) **acryloyl**-functional compound, (e) optionally,  $\geq 1$  active H-containing chain extender, and (f) optionally,  $\geq 1$  active H-containing compound bearing ionic groups. The **waterborne coating** compns. are especially suitable for clear coats. Thus, heating hexahydrophthalic anhydride 332 with polyethylene glycol monomethyl ether 1614 to 170° over 30 min, cooling to 140°, adding di(trimethylolpropane) 269, xylene 132 and a 85% **aqueous** H<sub>3</sub>PO<sub>4</sub> solution 3.3 g, heating to 235° while removing **water** azeotropically to an acid number of 5 mg-KOH/g, cooling to 180°, and distilling xylene off gave an **polyester** diol solidified at room temperature and having an acid number of 3.9 mg-KOH/g and an OH

number of 59 mg-KOH. Mixing the **polyester** 146.7 with an **acrylated** Eponex 1510 (hydrogenated bisphenol A glycidyl ether polymer) 273.2, trimethylolpropane 12.26, 4-hydroxybutyl **acrylate** 99.1, Desmodur W 260.8, di-tert-butyl-p-cresol 1.50 and 2-butanone 250 to 45°, stirring while bubbling with air, adding Sn(II) octanoate 0.94 g, heating at 80° for 6 h and working up gave a dispersion containing **acrylated** polyurethane with solids content 44%, Mn 2686, Mw 11,153 and particle diameter 120 nm. A **coating** composition was obtained by mixing the dispersion 50.0 with **water** 7.50, Bu glycol 2.50, BYK

346 (wetting agent) 0.25 and Darocur 1173 (photoinitiator) 1.28 parts.

IC ICM C08G018-67  
ICS C08G018-28; C09D175-16

CC 42-10 (**Coatings, Inks, and Related Products**)

ST photocurable **waterborne coating acrylic polyurethane** polyethylene glycol copolymer

IT **Polyesters, uses**  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(**acrylic-polyurethane-**, polyoxyethylene-containing; photoactivatable **waterborne coating** compns. containing **acrylic polyurethane** polymers)

IT **Crosslinking**  
(photochem.; photoactivatable **waterborne coating** compns. containing **acrylic polyurethane** polymers)

IT **Coating materials**  
(**water**-thinned; photoactivatable **waterborne coating** compns. containing **acrylic polyurethane** polymers)

IT 2082-81-7, Butanediol **dimethacrylate**  
RL: MOA (Modifier or additive use); USES (Uses)  
(SR 214, **crosslinker**; photoactivatable **waterborne coating** compns. containing **acrylic polyurethane** polymers)

IT 3290-92-4, Sartomer 350 6606-59-3, Sartomer 239 211502-14-6, Craynor 132  
RL: MOA (Modifier or additive use); USES (Uses)  
(**crosslinker**; photoactivatable **waterborne coating** compns. containing **acrylic polyurethane** polymers)

IT 822-06-0DP, reaction products with sulfonated Cardura E 10 maleate ester, polyethylene glycol Me ether, **acrylic polyester, acrylate epoxy** resin and polyisocyanate 79103-62-1DP, Desmodur W, reaction products with sulfonated Cardura E 10 maleate ester, polyethylene glycol Me ether, **acrylic polyester** and **crosslinkers** 80497-39-8DP, reaction products with sulfonated Cardura E 10 maleate ester, polyethylene glycol Me ether, **acrylic polyester, polyisocyanate and crosslinkers** 420115-56-6DP, reaction products with sulfonated Cardura E 10 maleate ester, **acrylated epoxy** resin, polyisocyanate and **crosslinkers** 420123-98-4P, Hydrogenated bisphenol A diglycidyl ether polymer **acrylate**, copolymer with di(trimethylolpropane)-hexahydrophthalic anhydride copolymer ester with PEG monomethyl ether, trimethylolpropane, 4-hydroxybutyl **acrylate** and Desmodur W **420124-00-1P**, Hydrogenated bisphenol A diglycidyl ether polymer **acrylate**, copolymer with di(trimethylolpropane)-hexahydrophthalic anhydride copolymer ester with PEG monomethyl ether, dimethylolpropionic acid, 4-hydroxybutyl **acrylate** and Desmodur W, salt with N,N-dimethylethanolamine 420124-01-2DP, Cardura E 10 maleate ester, sulfonated, reaction products with polyethylene glycol Me ether, **acrylated** hydrogenated bisphenol A diglycidyl ether polymer, polyisocyanate and **crosslinkers** 420124-04-5P **420124-06-7P**, Hydrogenated bisphenol A diglycidyl ether polymer **acrylate**, copolymer with di(trimethylolpropane)-hexahydrophthalic anhydride copolymer ester with PEG monomethyl ether, dimethylolpropionic acid, 1,6-hexanediol, 4-hydroxybutyl **acrylate** and Desmodur W  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP

(Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (photoactivatable **waterborne coating** compns. containing **acrylic polyurethane** polymers)

IT 207621-14-5, Primal E 3120 420784-23-2, LUX 101VP  
 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
 (photoactivatable **waterborne coating** compns. containing **acrylic polyurethane** polymers)

IT 7473-98-5, Darocur 1173 84434-11-7, Lucirin TPO-L 149260-52-6, Esacure KIP 100F 224632-52-4, Speedcure BEM  
 RL: CAT (Catalyst use); USES (Uses)  
 (photoinitiator; photoactivatable **waterborne coating** compns. containing **acrylic polyurethane** polymers)

IT 80497-39-8P, Hydrogenated bisphenol A diglycidyl ether polymer **acrylate** 420115-56-6P  
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
 (prepolymer; photoactivatable **waterborne coating** compns. containing **acrylic polyurethane** polymers)

IT **420123-98-4P**, Hydrogenated bisphenol A diglycidyl ether polymer **acrylate**, copolymer with di(trimethylolpropane)-hexahydrophthalic anhydride copolymer ester with PEG monomethyl ether, trimethylolpropane, 4-hydroxybutyl **acrylate** and Desmodur W **420124-00-1P**, Hydrogenated bisphenol A diglycidyl ether polymer **acrylate**, copolymer with di(trimethylolpropane)-hexahydrophthalic anhydride copolymer ester with PEG monomethyl ether, dimethylolpropionic acid, 4-hydroxybutyl **acrylate** and Desmodur W, salt with N,N-dimethylethanolamine **420124-04-5P 420124-06-7P**, Hydrogenated bisphenol A diglycidyl ether polymer **acrylate**, copolymer with di(trimethylolpropane)-hexahydrophthalic anhydride copolymer ester with PEG monomethyl ether, dimethylolpropionic acid, 1,6-hexanediol, 4-hydroxybutyl **acrylate** and Desmodur W  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (photoactivatable **waterborne coating** compns. containing **acrylic polyurethane** polymers)

RN 420123-98-4 HCAPLUS  
 CN 2-Propenoic acid, 4-hydroxybutyl ester, polymer with Desmodur W, 2-ethyl-2-(hydroxymethyl)-1,3-propanediol, hexahydro-1,3-isobenzofurandione polymer with 2,2'-[oxybis(methylene)]bis[2-ethyl-1,3-propanediol] ester with  $\alpha$ -methyl- $\omega$ -hydroxypoly(oxy-1,2-ethanediyl), and 2,2'-[(1-methylethylidene)bis(4,1-cyclohexanediylloxymethylene)]bis[oxirane] homopolymer 2-propenoate (9CI) (CA INDEX NAME)

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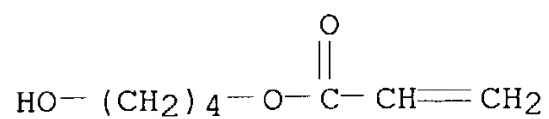
CRN 79103-62-1  
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 CCI MAN

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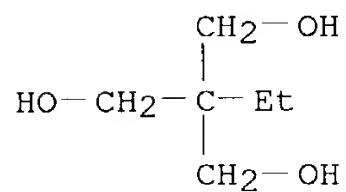
CMF C7 H12 O3



CM 3

CRN 77-99-6

CMF C6 H14 O3



CM 4

CRN 420115-56-6

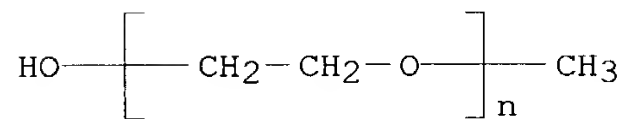
CMF (C12 H26 O5 . C8 H10 O3)x . x (C2 H4 O)n C H4 O

CM 5

CRN 9004-74-4

CMF (C2 H4 O)n C H4 O

CCI PMS



CM 6

CRN 229636-22-0

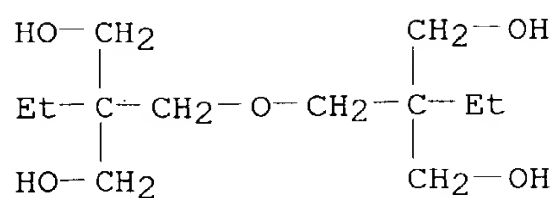
CMF (C12 H26 O5 . C8 H10 O3)x

CCI PMS

CM 7

CRN 23235-61-2

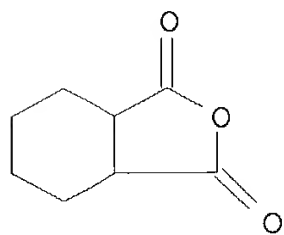
CMF C12 H26 O5



CM 8

CRN 85-42-7

CMF C8 H10 O3



CM 9

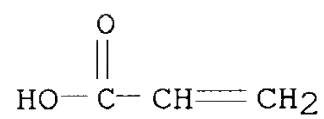
CRN 80497-39-8

CMF (C21 H36 O4) x . x C3 H4 O2

CM 10

CRN 79-10-7

CMF C3 H4 O2



CM 11

CRN 26283-70-5

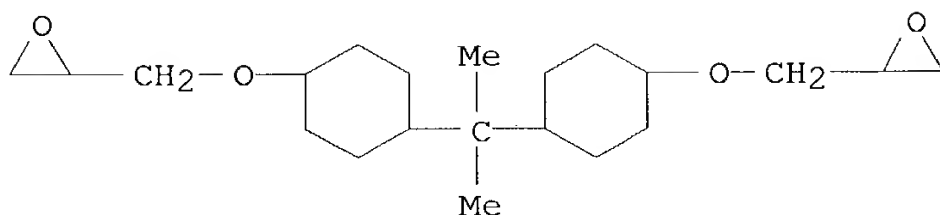
CMF (C21 H36 O4) x

CCI PMS

CM 12

CRN 13410-58-7

CMF C21 H36 O4



RN 420124-00-1 HCAPLUS

CN 2-Propenoic acid, 4-hydroxybutyl ester, polymer with Desmodur W, hexahydro-1,3-isobenzofurandione polymer with 2,2'-[oxybis(methylene)]bis[2-ethyl-1,3-propanediol] ester with  $\alpha$ -methyl- $\omega$ -hydroxypoly(oxy-1,2-ethanediyl), 3-hydroxy-2-(hydroxymethyl)-2-methylpropanoic acid and 2,2'-[(1-methylethylidene)bis(4,1-cyclohexanediylloxymethylene)]bis[oxirane] homopolymer 2-propenoate, compd. with 2-(dimethylamino)ethanol (9CI) (CA INDEX NAME)

CM 1

CRN 108-01-0

CMF C4 H11 N O

Me<sub>2</sub>N-CH<sub>2</sub>-CH<sub>2</sub>-OH

CM 2

CRN 420123-99-5

CMF ((C21 H36 O4)x . (C12 H26 O5 . C8 H10 O3)x . C7 H12 O3 . C5 H10 O4 . x C3 H4 O2 . x (C2 H4 O)n C H4 O . Unspecified)x

CCI PMS

CM 3

CRN 79103-62-1

CMF Unspecified

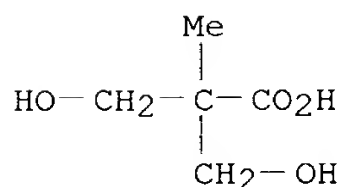
CCI MAN

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CRN 4767-03-7

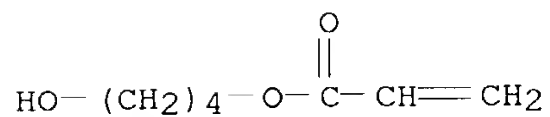
CMF C5 H10 O4





CM 5

CRN 2478-10-6  
CMF C7 H12 O3

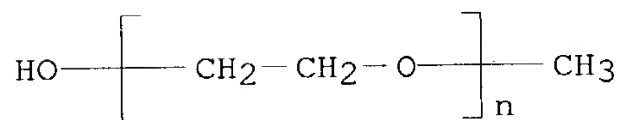


CM 6

CRN 420115-56-6  
CMF (C12 H26 O5 . C8 H10 O3)x . x (C2 H4 O)n C H4 O

CM 7

CRN 9004-74-4  
CMF (C2 H4 O)n C H4 O  
CCI PMS

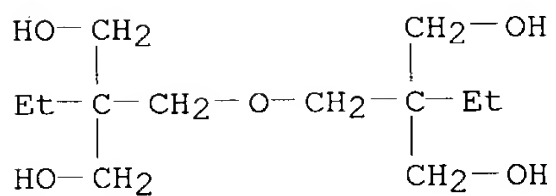


CM 8

CRN 229636-22-0  
CMF (C12 H26 O5 . C8 H10 O3)x  
CCI PMS

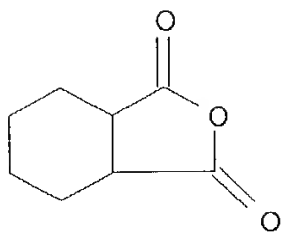
CM 9

CRN 23235-61-2  
CMF C12 H26 O5



CM 10

CRN 85-42-7  
CMF C8 H10 O3



CM 11

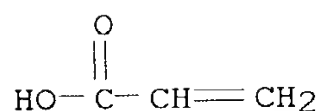
CRN 80497-39-8

CMF (C21 H36 O4)x . x C3 H4 O2

CM 12

CRN 79-10-7

CMF C3 H4 O2



CM 13

CRN 26283-70-5

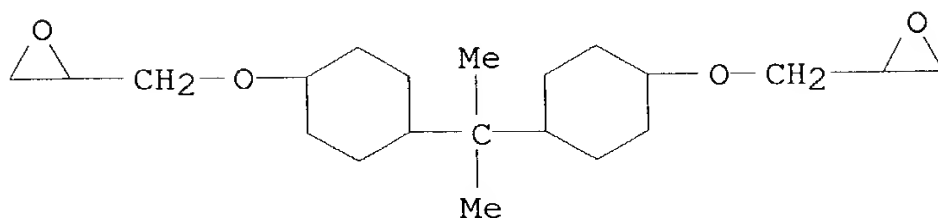
CMF (C21 H36 O4)x

CCI PMS

CM 14

CRN 13410-58-7

CMF C21 H36 O4

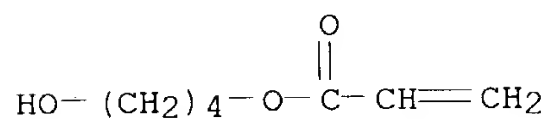


RN 420124-04-5 HCAPLUS

CN 2-Propenoic acid, 4-hydroxybutyl ester, polymer with 1,6-diisocyanatohexane, 2-ethyl-2-(hydroxymethyl)-1,3-propanediol, hexahydro-1,3-isobenzofurandione polymer with 2,2'-[oxybis(methylene)]bis[2-ethyl-1,3-propanediol] ester with  $\alpha$ -methyl- $\omega$ -hydroxypoly(oxy-1,2-ethanediyl), and 2,2'-[(1-methylethylidene)bis(4,1-cyclohexanediylloxymethylene)]bis[oxirane] homopolymer 2-propenoate (9CI) (CA INDEX NAME)

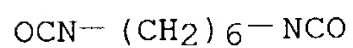
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CRN 2478-10-6  
CMF C7 H12 O3



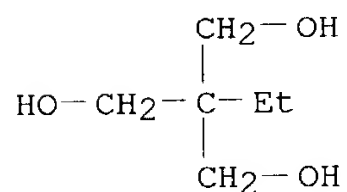
CM 2

CRN 822-06-0  
CMF C8 H12 N2 O2



CM 3

CRN 77-99-6  
CMF C6 H14 O3

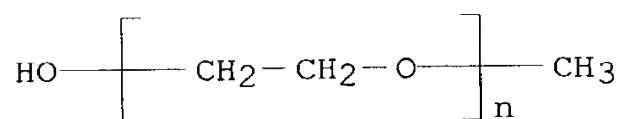


CM 4

CRN 420115-56-6  
CMF (C12 H26 O5 . C8 H10 O3)x . x (C2 H4 O)n C H4 O

CM 5

CRN 9004-74-4  
CMF (C2 H4 O)n C H4 O  
CCI PMS

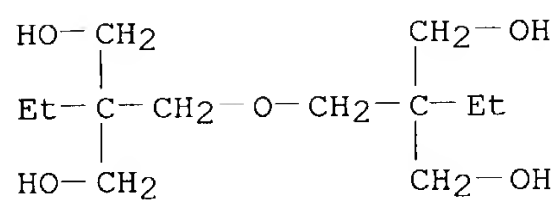


CM 6

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CCI PMS

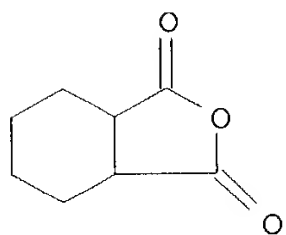
CM 7

CRN 23235-61-2  
CMF C12 H26 O5



CM 8

CRN 85-42-7  
CMF C8 H10 O3

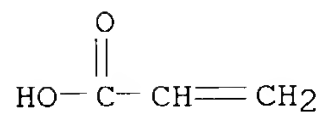


CM 9

CRN 80497-39-8  
CMF (C21 H36 O4) x . x C3 H4 O2

CM 10

CRN 79-10-7  
CMF C3 H4 O2

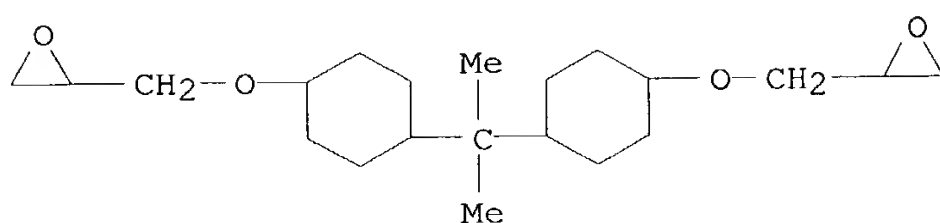


CM 11

CRN 26283-70-5  
CMF (C21 H36 O4) x  
CCI PMS

CM 12

CRN 13410-58-7  
CMF C21 H36 O4



RN 420124-06-7 HCAPLUS

CN 2-Propenoic acid, 4-hydroxybutyl ester, polymer with Desmodur W, hexahydro-1,3-isobenzofurandione polymer with 2,2'-[oxybis(methylene)]bis[2-ethyl-1,3-propanediol] ester with  $\alpha$ -methyl- $\omega$ -hydroxypoly(oxy-1,2-ethanediyl), 1,6-hexanediol, 3-hydroxy-2-(hydroxymethyl)-2-methylpropanoic acid and 2,2'-[(1-methylethylidene)bis(4,1-cyclohexanediyloxymethylene)]bis[oxirane] homopolymer 2-propenoate (9CI) (CA INDEX NAME)

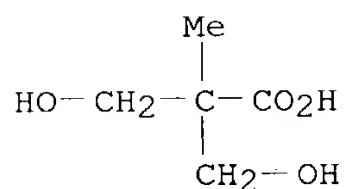
CM 1

CRN 79103-62-1  
CMF Unspecified  
CCI MAN

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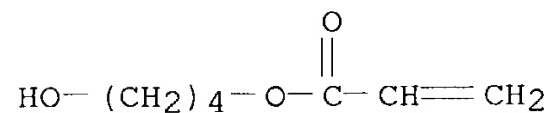
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CRN 4767-03-7  
CMF C5 H10 O4



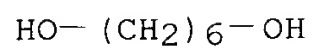
CM 3

CRN 2478-10-6  
CMF C7 H12 O3



CM 4

CRN 629-11-8  
CMF C6 H14 O2



CM 5

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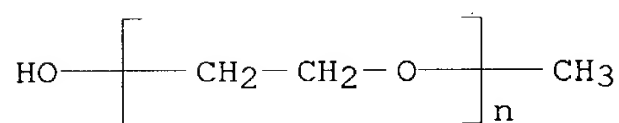
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CM 6

CRN 9004-74-4

CMF (C2 H4 O)n C H4 O

CCI PMS



CM 7

CRN 229636-22-0

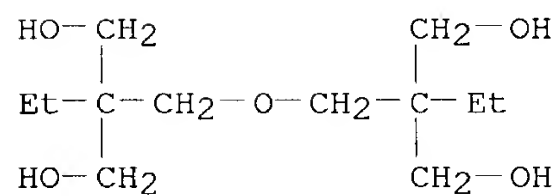
CMF (C12 H26 O5 . C8 H10 O3)x

CCI PMS

CM 8

CRN 23235-61-2

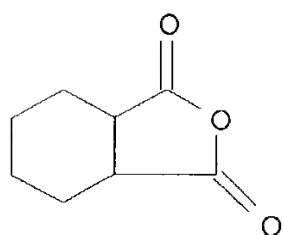
CMF C12 H26 O5



CM 9

CRN 85-42-7

CMF C8 H10 O3

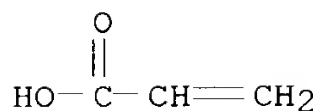


CM 10

CRN 80497-39-8  
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CM 11

CRN 79-10-7  
CMF C3 H4 O2

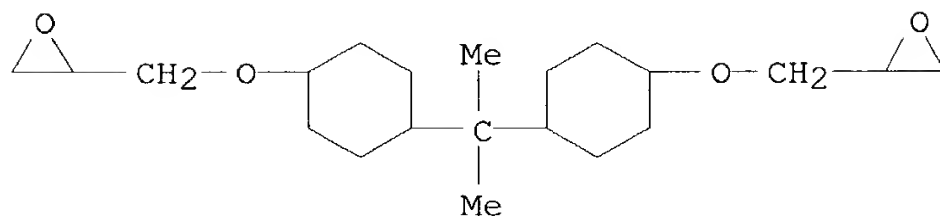


CM 12

CRN 26283-70-5  
CMF (C21 H36 O4)x  
CCI PMS

CM 13

CRN 13410-58-7  
CMF C21 H36 O4



RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L56 ANSWER 8 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN  
AN 2002:104689 HCAPLUS  
DN 136:136383  
TI **Waterborne** base coats and preparing **waterborne** base  
coat/clear coat-two-layer **coatings**  
IN Goebel, Armin; Stein, Manfred; Schmidt, Holger; Vogt-Birnbrich, Bettina  
PA E. I. Du Pont de Nemours & Co., USA  
SO Eur. Pat. Appl., 8 pp.  
CODEN: EPXXDW  
DT Patent  
LA English  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1178091	A2	20020206	EP 2001-116309	20010705
	EP 1178091	A3	20020508		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				

US 6350809 B1 20020226 US 2000-631196 20000803  
 PRAI US 2000-631196 A 20000803

AB **Water**-based base coats, for automotive applications, have 40-90% **water**-dilutable **polyester** binder, 0-50%  $\geq 1$  addnl. binders, 0-20%  $\geq 1$  paste resins and 10-40%  $\geq 1$  **crosslinking** agents, where the **water**-dilutable **polyester** binder has a weight-average mol. weight 5000-50,000, an acid value 10-50 mg KOH/g, a OH value 30-100 mg KOH/g and an average OH functionality 2-3 and consists of 5-25% structural units -O-R-O- derived from  $\geq 1$  macrodiols having OH value 25-120 mg KOH/g, where R represents residues located between the terminal hydroxyl groups of the  $\geq 1$  macrodiols. An example **water**-dilutable **polyester** was formed from neopentyl glycol 971, hexanediol 956, polytetrahydrofuran diol 597, hexahydrophthalic anhydride 615, dimer fatty acid 2277, dimethylethanolamine 110, and trimellitic anhydride 1023 g.

IC ICM C09D167-00  
 ICS B05D007-00

CC 42-10 (**Coatings**, Inks, and Related Products)

ST multilayer **waterborne** base powder clearcoat; **water** dilutable **polyester waterborne** base coat

IT **Polyesters**, uses  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (acrylate-terminated; **waterborne** base coats for preparing **waterborne** base coat/powder clear coat-two-layer **coatings** with reduced stoving-yellowing)

IT **Epoxy** resins, uses  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (acrylates, powder clear coat; **waterborne** base coats for preparing **waterborne** base coat/powder clear coat-two-layer **coatings** with reduced stoving-yellowing)

IT **Polyurethanes**, uses  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (acrylates; **waterborne** base coats for preparing **waterborne** base coat/powder clear coat-two-layer **coatings** with reduced stoving-yellowing)

IT Aminoplasts  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (crosslinker; **waterborne** base coats for preparing **waterborne** base coat/powder clear coat-two-layer **coatings** with reduced stoving-yellowing)

IT Fatty acids, uses  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (dimer acids, **polyester** derivs.; **waterborne** base coats for preparing **waterborne** base coat/powder clear coat-two-layer **coatings** with reduced stoving-yellowing)

IT **Polyurethanes**, uses  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (polyester-; **waterborne** base coats for preparing **waterborne** base coat/powder clear coat-two-layer **coatings** with reduced stoving-yellowing)

IT **Coating** materials  
 (topcoats; **waterborne** base coats for preparing



**waterborne** base coat/powder clear coat-two-layer  
**coatings** with reduced stoving-yellowing)

IT **Coating materials**  
 (**water**-thinned; **waterborne** base coats for preparing  
**waterborne** base coat/powder clear coat-two-layer  
**coatings** with reduced stoving-yellowing)

IT **Polyesters, uses**  
**Polyurethanes, uses**  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM  
 (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (**waterborne** base coats for preparing **waterborne** base  
 coat/powder clear coat-two-layer **coatings** with reduced  
 stoving-yellowing)

IT 9003-08-1P, Melamine resin  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM  
 (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (**crosslinker**; **waterborne** base coats for preparing  
**waterborne** base coat/powder clear coat-two-layer  
**coatings** with reduced stoving-yellowing)

IT 85-42-7DP, Hexahydrophthalic anhydride, polymers with macrodiol,  
 hexanediol, dimer fatty acid, trimellitic anhydride and neopentyl glycol,  
 dimethylethanolamine salt 126-30-7DP, Neopentyl glycol, polymers with  
 dimer fatty acid, macrodiol, hexanediol, trimellitic anhydride, and  
 hexahydrophthalic anhydride, dimethylethanolamine salt 552-30-7DP,  
 Trimellitic anhydride, polymers with macrodiol, hexanediol, dimer fatty  
 acid, hexahydrophthalic anhydride and neopentyl glycol,  
 dimethylethanolamine salt 629-11-8DP, 1,6-Hexanediol, polymers with  
 macrodiol, dimer fatty acid, trimellitic anhydride, and hexahydrophthalic  
 anhydride, dimethylethanolamine salt 25190-06-1DP, polymers with  
 hexanediol, dimer fatty acid, trimellitic anhydride and neopentyl glycol  
 and hexahydrophthalic anhydride, dimethylethanolamine salt  
**162127-74-4P**, Adipic acid-dimethylolpropionic acid-1,6-hexanediol-  
 IPDI-isophthalic acid-trimethylolpropane copolymer triethylamine salt  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM  
 (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (**waterborne** base coats for preparing **waterborne** base  
 coat/powder clear coat-two-layer **coatings** with reduced  
 stoving-yellowing)

IT **162127-74-4P**, Adipic acid-dimethylolpropionic acid-1,6-hexanediol-  
 IPDI-isophthalic acid-trimethylolpropane copolymer triethylamine salt  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM  
 (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (**waterborne** base coats for preparing **waterborne** base  
 coat/powder clear coat-two-layer **coatings** with reduced  
 stoving-yellowing)

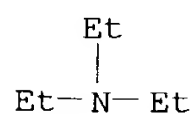
RN 162127-74-4 HCAPLUS

CN 1,3-Benzenedicarboxylic acid, polymer with 2-ethyl-2-(hydroxymethyl)-1,3-  
 propanediol, hexanedioic acid, 1,6-hexanediol, 3-hydroxy-2-(hydroxymethyl)-  
 2-methylpropanoic acid and 5-isocyanato-1-(isocyanatomethyl)-1,3,3-  
 trimethylcyclohexane, compd. with N,N-diethylethanamine (9CI) (CA INDEX  
 NAME)

CM 1

CRN 121-44-8

CMF C6 H15 N



CM 2

CRN 147320-44-3

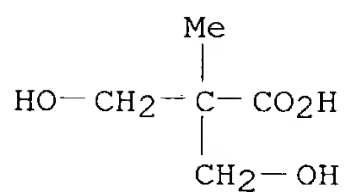
CMF (C12 H18 N2 O2 . C8 H6 O4 . C6 H14 O3 . C6 H14 O2 . C6 H10 O4 . C5 H10 O4) x

CCI PMS

CM 3

CRN 4767-03-7

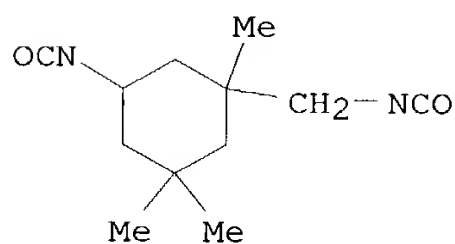
CMF C5 H10 O4



CM 4

CRN 4098-71-9

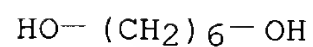
CMF C12 H18 N2 O2



CM 5

CRN 629-11-8

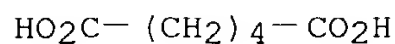
CMF C6 H14 O2



CM 6

CRN 124-04-9

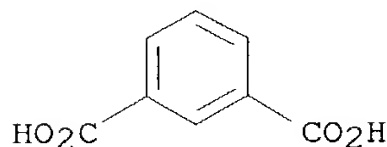
CMF C6 H10 O4



CM 7

CRN 121-91-5

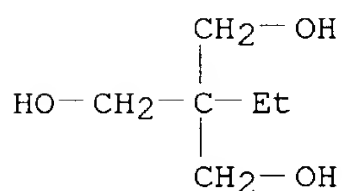
CMF C8 H6 O4



CM 8

CRN 77-99-6

CMF C6 H14 O3



L56 ANSWER 9 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2001:868599 HCAPLUS

DN 136:7812

TI **Aqueous crosslinkable** binder composition,**coating**, its preparation, coated substrate and lacquer or sealing composition

IN Buter, Roelof; Steenbergen, Andre; Geurink, Petrus Johannes Arnoldus; Scherer, Taco

PA Akzo Nobel N.V., Neth.

SO PCT Int. Appl., 46 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001090265	A1	20011129	WO 2001-EP5510	20010511
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
	RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
	BR 2001010847	A	20030211	BR 2001-10847	20010511

EP 1285035 A1 20030226 EP 2001-936362 20010511  
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
IE, SI, LT, LV, FI, RO, MK, CY, AL, TR  
JP 2003534437 T2 20031118 JP 2001-587066 20010511  
US 2002016407 A1 20020207 US 2001-861928 20010521  
US 6509408 B2 20030121  
PRAI EP 2000-201761 A 20000519  
WO 2001-EP5510 W 20010511  
AB **Aqueous**-based **crosslinkable** binder composition comprises (A) an  
**aqueous** dispersion of a polyester-polyacrylate hybrid resin, 50-90% of  
which is composed of polyester and 10-50% polyacrylate, obtained by  
grafting a composition of radically polymerizable unsatd. monomers onto a  
partially unsatd. hydroxy-functional polyester resin, and (B) an organic  
polyisocyanate, where the partially unsatd. hydroxy-functional polyester  
is obtained by reaction of a mixture of polycarboxylic and, optionally,  
monocarboxylic acids, and  $\geq 1$  (cyclo)aliphatic alcs., where 0.5-6 mol  
of the acids or alcs. are ethylenically unsatd., and the unsatd. monomers  
comprise a mixture of hydrophobic and hydrophilic monomers.  
IC ICM C09D175-06  
ICS C08G018-08; C08G018-42; C08G018-63; C08G018-68; C08G018-81;  
C08F283-01; C09D167-06  
CC 42-10 (**Coatings**, Inks, and Related Products)  
ST polyester polyurethane acrylate **coating** lacquer sealing compn  
IT Polyesters, preparation  
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT  
(Reactant or reagent)  
(acrylates; **aqueous crosslinkable** acrylic-polyester-  
polyurethane binder composition for **coating**, lacquer or sealing  
composition spray applied to substrates without excessive foaming)  
IT Lacquers  
Sealing compositions  
(**aqueous crosslinkable** acrylic-polyester-polyurethane  
binder composition for **coating**, lacquer or sealing composition spray  
applied to substrates without excessive foaming)  
IT Polyurethanes, uses  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material  
use); PREP (Preparation); USES (Uses)  
(polyester-, acrylates; **aqueous crosslinkable**  
acrylic-polyester-polyurethane binder composition for **coating**,  
lacquer or sealing composition spray applied to substrates without excessive  
foaming)  
IT **Coating** materials  
(solvent-resistant; **aqueous crosslinkable**  
acrylic-polyester-polyurethane binder composition for **coating**,  
lacquer or sealing composition spray applied to substrates without excessive  
foaming)  
IT Polyesters, preparation  
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT  
(Reactant or reagent)  
(unsatd.; **aqueous crosslinkable** acrylic-polyester-  
polyurethane binder composition for **coating**, lacquer or sealing  
composition spray applied to substrates without excessive foaming)  
IT 375824-15-0P 375824-16-1P 376356-98-8P 376357-01-6P 376357-05-0P  
376357-08-3P 376357-12-9P 376357-18-5P 376357-22-1P  
**376357-27-6P** 376357-34-5P **376357-37-8P**  
**376357-40-3P**  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or  
engineered material use); PREP (Preparation); USES (Uses)

(**aqueous crosslinkable** acrylic-polyester-polyurethane binder composition for **coating**, lacquer or sealing composition spray applied to substrates without excessive foaming)

IT 375824-12-7P, 1,4-Cyclohexanedimethanol-isophthalic acid-itaconic acid-neopentyl glycol-sebacic acid-trimethylolpropane copolymer  
**375824-13-8P** 375824-14-9P, Acrylic acid-1,4-cyclohexanedimethanol-2-ethylhexyl acrylate-2-hydroxyethyl methacrylate-isophthalic acid-itaconic acid-neopentyl glycol-sebacic acid-styrene-trimethylolpropane-AMPS copolymer 376356-55-7P  
 376356-59-1P 376356-63-7P 376356-67-1P 376356-72-8P 376356-76-2P  
 376356-79-5P **376356-82-0P** 376356-86-4P **376356-90-0P**  
**376356-95-5P** 376357-78-7P  
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
 (**coating** binder precursor; **aqueous crosslinkable** acrylic-polyester-polyurethane binder composition for **coating**, lacquer or sealing composition spray applied to substrates without excessive foaming)

IT **376357-27-6P 376357-37-8P 376357-40-3P**  
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (**aqueous crosslinkable** acrylic-polyester-polyurethane binder composition for **coating**, lacquer or sealing composition spray applied to substrates without excessive foaming)

RN 376357-27-6 HCAPLUS  
 CN Decanedioic acid, polymer with (chloromethyl)oxirane, Desmodur LS 2025, ethenylbenzene, 2-ethylhexyl 2-propenoate, 2-ethyl-2-(hydroxymethyl)-1,3-propanediol, 2-hydroxyethyl 2-methyl-2-propenoate, methylenebutanedioic acid, 4,4'-(1-methylethylidene)bis[phenol], methyloxirane polymer with oxirane methyl 2-[[[1-methyl-1-[3-(1-methylethenyl)phenyl]ethyl]amino]carbonylamino]propyl ether, 2-methyl-2-[(1-oxo-2-propenyl)amino]-1-propanesulfonic acid and 2-propenoic acid (9CI) (CA INDEX NAME)

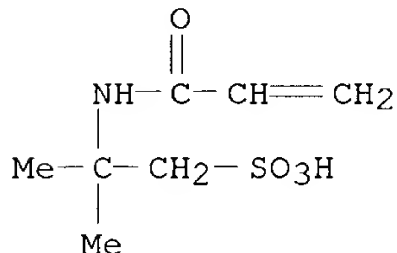
CM 1

CRN 195215-43-1  
 CMF Unspecified  
 CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

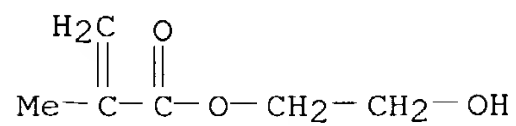
CM 2

CRN 15214-89-8  
 CMF C7 H13 N O4 S



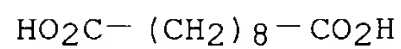
CM 3

CRN 868-77-9  
CMF C6 H10 O3



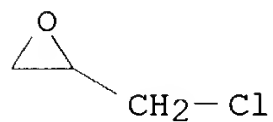
CM 4

CRN 111-20-6  
CMF C10 H18 O4



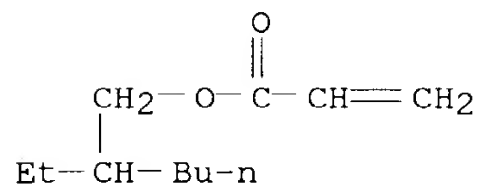
CM 5

CRN 106-89-8  
CMF C3 H5 Cl O



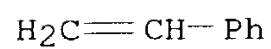
CM 6

CRN 103-11-7  
CMF C11 H20 O2



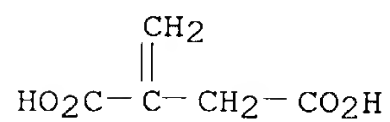
CM 7

CRN 100-42-5  
CMF C8 H8



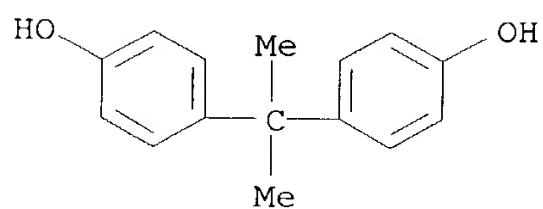
CM 8

CRN 97-65-4  
CMF C5 H6 O4



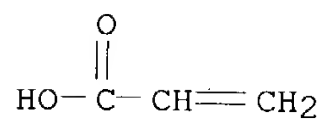
CM 9

CRN 80-05-7  
CMF C15 H16 O2



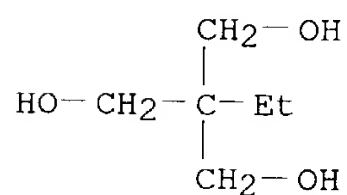
CM 10

CRN 79-10-7  
CMF C3 H4 O2



CM 11

CRN 77-99-6  
CMF C6 H14 O3

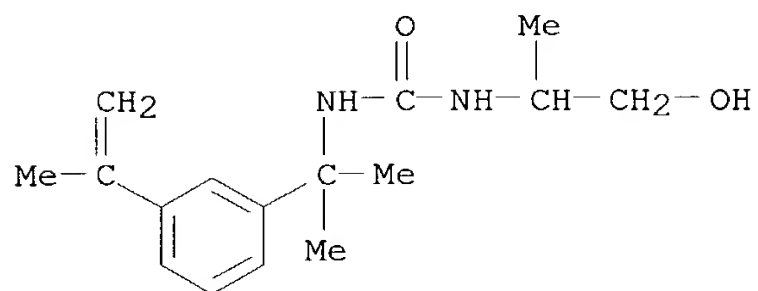


CM 12

CRN 376356-71-7  
CMF C16 H24 N2 O2 . (C3 H6 O . C2 H4 O)x . C H4 O

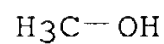
CM 13

CRN 376356-70-6  
CMF C16 H24 N2 O2



CM 14

CRN 67-56-1  
CMF C H4 O

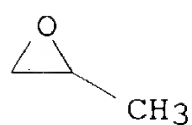


CM 15

CRN 9003-11-6  
CMF (C3 H6 O . C2 H4 O) x  
CCI PMS

CM 16

CRN 75-56-9  
CMF C3 H6 O



CM 17

CRN 75-21-8  
CMF C2 H4 O



RN 376357-37-8 HCAPLUS  
CN 1,3-Benzenedicarboxylic acid, polymer with 1,4-cyclohexanedimethanol, decanedioic acid, 2,2-dimethyl-1,3-propanediol, 2-ethyl-2-(hydroxymethyl)-1,3-propanediol and methylenebutanedioic acid, 2-hydroxy-3-[(1-oxoneodecyl)oxy]propyl ester, polymer with Bayhydur LS 2032, Desmodur LS



2025, ethenylbenzene, 2-ethylhexyl 2-propenoate, 2-hydroxyethyl 2-methyl-2-propenoate, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane, methyloxirane polymer with oxirane methyl 2-[[[[1-methyl-1-[3-(1-methylethenyl)phenyl]ethyl]amino]carbonyl]amino]propyl ether, 2-methyl-2-[(1-oxo-2-propenyl)amino]-1-propanesulfonic acid and 2-propenoic acid (9CI) (CA INDEX NAME)

CM 1

CRN 195215-43-1  
CMF Unspecified  
CCI PMS, MAN

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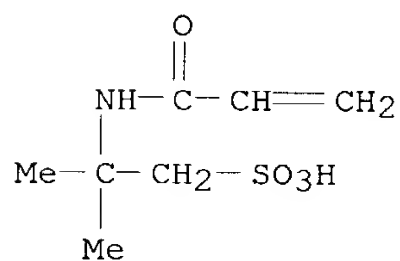
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CRN 185464-32-8  
CMF Unspecified  
CCI PMS, MAN

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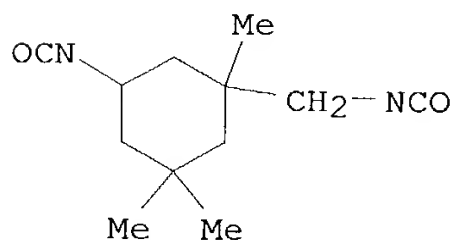
CM 3

CRN 15214-89-8  
CMF C7 H13 N O4 S



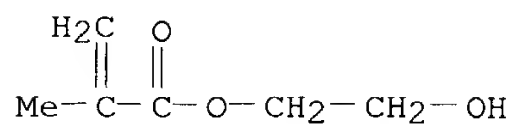
CM 4

CRN 4098-71-9  
CMF C12 H18 N2 O2



CM 5

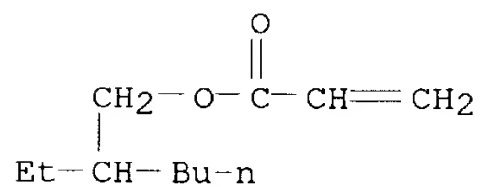
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CMF C6 H10 O3



CM 6

CRN 103-11-7

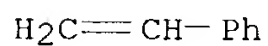
CMF C11 H20 O2



CM 7

CRN 100-42-5

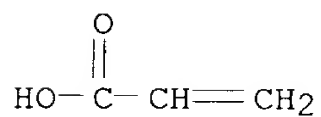
CMF C8 H8



CM 8

CRN 79-10-7

CMF C3 H4 O2



CM 9

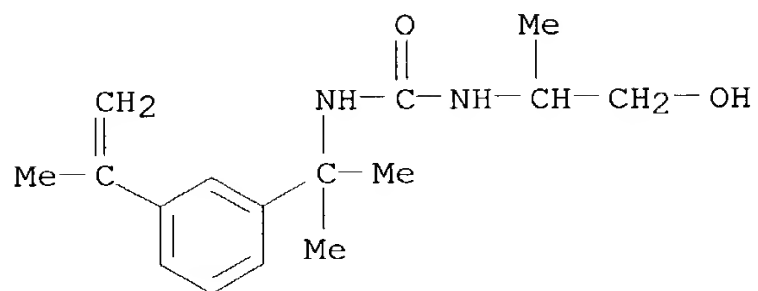
CRN 376356-71-7

CMF C16 H24 N2 O2 . (C3 H6 O . C2 H4 O)x . C H4 O

CM 10

CRN 376356-70-6

CMF C16 H24 N2 O2



CM 11

CRN 67-56-1

CMF C H4 O

H<sub>3</sub>C-OH

CM 12

CRN 9003-11-6

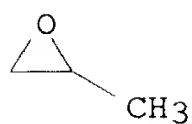
CMF (C3 H6 O . C2 H4 O) x

CCI PMS

CM 13

CRN 75-56-9

CMF C3 H6 O



CM 14

CRN 75-21-8

CMF C2 H4 O



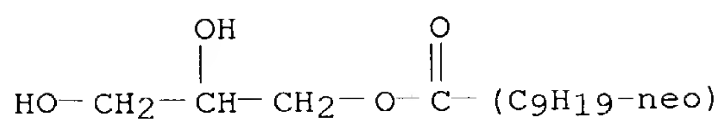
CM 15

CRN 376356-55-7

CMF C13 H26 O4 . x (C10 H18 O4 . C8 H16 O2 . C8 H6 O4 . C6 H14 O3 . C5 H12 O2 . C5 H6 O4) x

CM 16

CRN 79245-77-5  
CMF C13 H26 O4  
CCI IDS

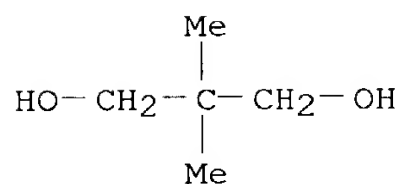


CM 17

CRN 375824-12-7  
CMF (C10 H18 O4 . C8 H16 O2 . C8 H6 O4 . C6 H14 O3 . C5 H12 O2 . C5 H6 O4) x  
CCI PMS

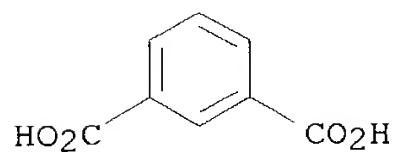
CM 18

CRN 126-30-7  
CMF C5 H12 O2



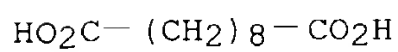
CM 19

CRN 121-91-5  
CMF C8 H6 O4



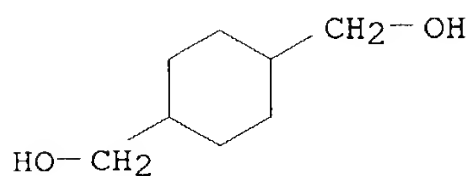
CM 20

CRN 111-20-6  
CMF C10 H18 O4



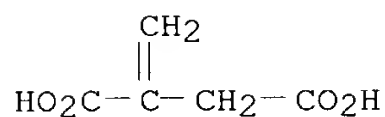
CM 21

CRN 105-08-8  
CMF C8 H16 O2



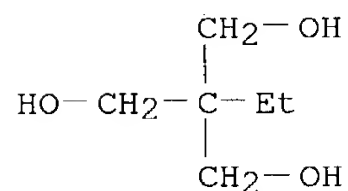
CM 22

CRN 97-65-4  
CMF C5 H6 O4



CM 23

CRN 77-99-6  
CMF C6 H14 O3



RN 376357-40-3 HCAPLUS  
CN 1,3-Benzenedicarboxylic acid, polymer with 1,4-cyclohexanedimethanol, decanedioic acid, 2-ethyl-2-(hydroxymethyl)-1,3-propanediol and methylenebutanedioic acid, 2-hydroxy-3-[(1-oxodecyl)oxy]propyl ester, polymer with Bayhydur LS 2032, Desmodur LS 2025, ethenylbenzene, 2-ethylhexyl 2-propenoate, 2-hydroxyethyl 2-methyl-2-propenoate, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane, methyloxirane polymer with oxirane methyl 2-[[[1-methyl-1-[3-(1-methylethenyl)phenyl]ethyl]amino]carbonyl]amino]propyl ether, 2-methyl-2-[(1-oxo-2-propenyl)amino]-1-propanesulfonic acid and 2-propenoic acid (9CI) (CA INDEX NAME)

CM 1

CRN 195215-43-1  
CMF Unspecified  
CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

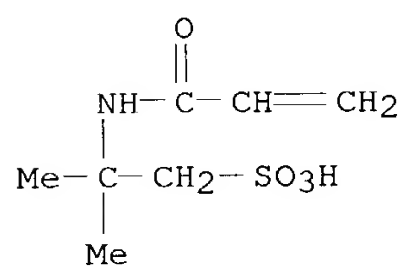
CM 2

CRN 185464-32-8  
CMF Unspecified  
CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

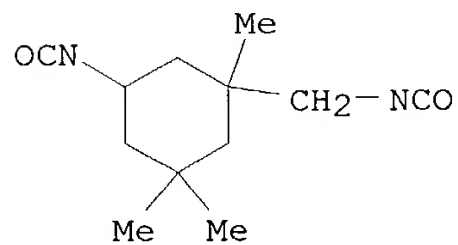
CM 3

CRN 15214-89-8  
CMF C7 H13 N O4 S



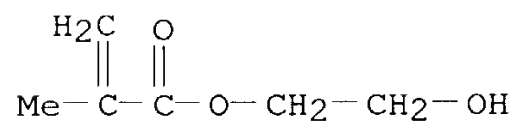
CM 4

CRN 4098-71-9  
CMF C12 H18 N2 O2



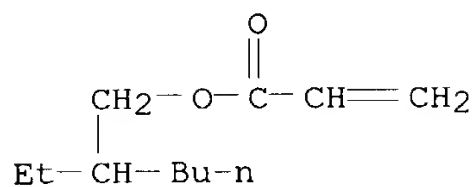
CM 5

CRN 868-77-9  
CMF C6 H10 O3



CM 6

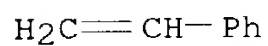
CRN 103-11-7  
CMF C11 H20 O2



CM 7

CRN 100-42-5

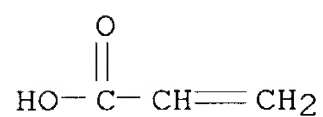
CMF C8 H8



CM 8

CRN 79-10-7

CMF C3 H4 O2



CM 9

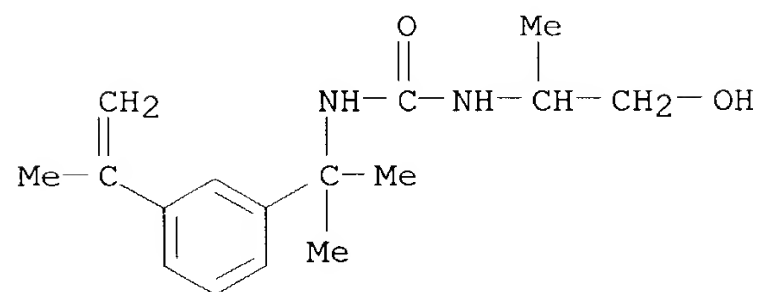
CRN 376356-71-7

CMF C16 H24 N2 O2 . (C3 H6 O . C2 H4 O)x . C H4 O

CM 10

CRN 376356-70-6

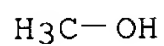
CMF C16 H24 N2 O2



CM 11

CRN 67-56-1

CMF C H4 O



CM 12

CRN 9003-11-6

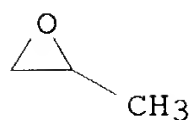
CMF (C3 H6 O . C2 H4 O) x

CCI PMS

CM 13

CRN 75-56-9

CMF C3 H6 O



CM 14

CRN 75-21-8

CMF C2 H4 O



CM 15

CRN 376356-67-1

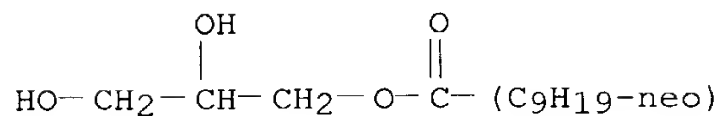
CMF C13 H26 O4 . x (C10 H18 O4 . C8 H16 O2 . C8 H6 O4 . C6 H14 O3 . C5 H6 O4) x

CM 16

CRN 79245-77-5

CMF C13 H26 O4

CCI IDS



CM 17

CRN 376356-66-0

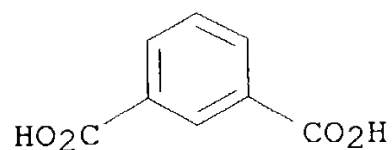
CMF (C10 H18 O4 . C8 H16 O2 . C8 H6 O4 . C6 H14 O3 . C5 H6 O4) x

CCI PMS



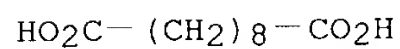
CM 18

CRN 121-91-5  
CMF C8 H6 O4



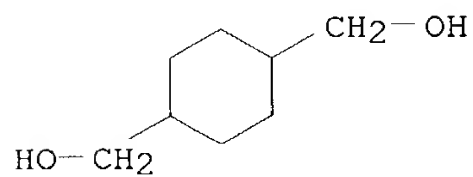
CM 19

CRN 111-20-6  
CMF C10 H18 O4



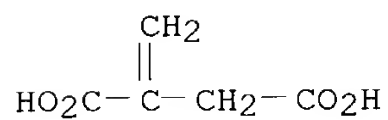
CM 20

CRN 105-08-8  
CMF C8 H16 O2



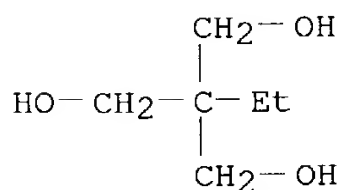
CM 21

CRN 97-65-4  
CMF C5 H6 O4



CM 22

CRN 77-99-6  
CMF C6 H14 O3



IT 375824-13-8P 376356-82-0P 376356-90-0P

376356-95-5P

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(coating binder precursor; aqueous

crosslinkable acrylic-polyester-polyurethane binder composition for coating, lacquer or sealing composition spray applied to substrates without excessive foaming)

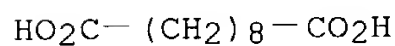
RN 375824-13-8 HCAPLUS

CN Decanedioic acid, polymer with (chloromethyl)oxirane, 2-ethyl-2-(hydroxymethyl)-1,3-propanediol, methylenebutanedioic acid and 4,4'-(1-methylethylidene)bis[phenol] (9CI) (CA INDEX NAME)

CM 1

CRN 111-20-6

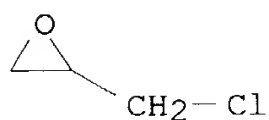
CMF C10 H18 O4



CM 2

CRN 106-89-8

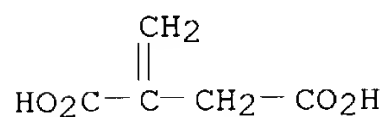
CMF C3 H5 Cl O



CM 3

CRN 97-65-4

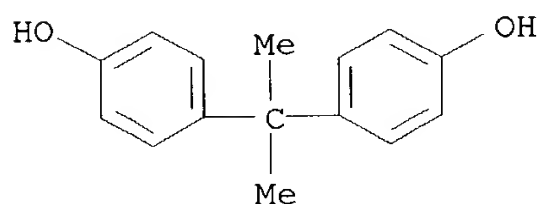
CMF C5 H6 O4



CM 4

CRN 80-05-7

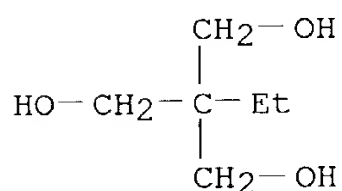
CMF C15 H16 O2



CM 5

CRN 77-99-6

CMF C6 H14 O3



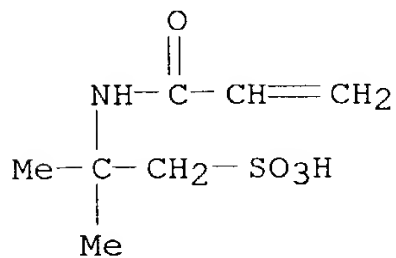
RN 376356-82-0 HCAPLUS

CN Decanedioic acid, polymer with (chloromethyl)oxirane, ethenylbenzene, 2-ethylhexyl 2-propenoate, 2-ethyl-2-(hydroxymethyl)-1,3-propanediol, 2-hydroxyethyl 2-methyl-2-propenoate, methylenebutanedioic acid, 4,4'-(1-methylethylidene)bis[phenol], methyloxirane polymer with oxirane methyl 2-[[[1-methyl-1-[3-(1-methylethenyl)phenyl]ethyl]amino]carbonyl]amino]propyl ether, 2-methyl-2-[(1-oxo-2-propenyl)amino]-1-propanesulfonic acid and 2-propenoic acid (9CI) (CA INDEX NAME)

CM 1

CRN 15214-89-8

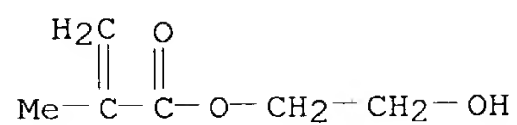
CMF C7 H13 N O4 S



CM 2

CRN 868-77-9

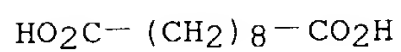
CMF C6 H10 O3



CM 3

CRN 111-20-6

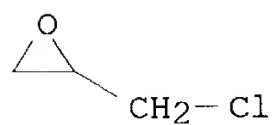
CMF C10 H18 O4



CM 4

CRN 106-89-8

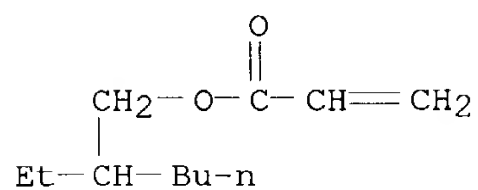
CMF C3 H5 Cl O



CM 5

CRN 103-11-7

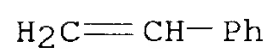
CMF C11 H20 O2



CM 6

CRN 100-42-5

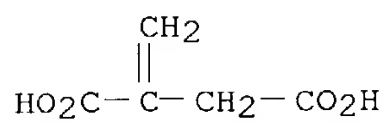
CMF C8 H8



CM 7

CRN 97-65-4

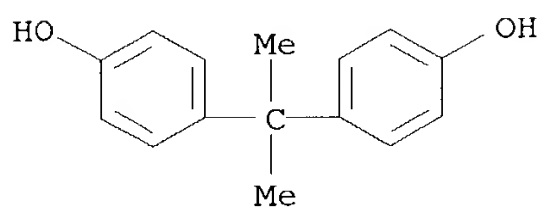
CMF C5 H6 O4



CM 8

CRN 80-05-7

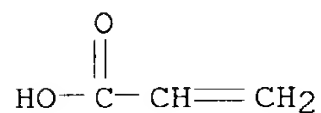
CMF C15 H16 O2



CM 9

CRN 79-10-7

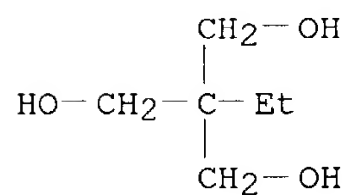
CMF C3 H4 O2



CM 10

CRN 77-99-6

CMF C6 H14 O3



CM 11

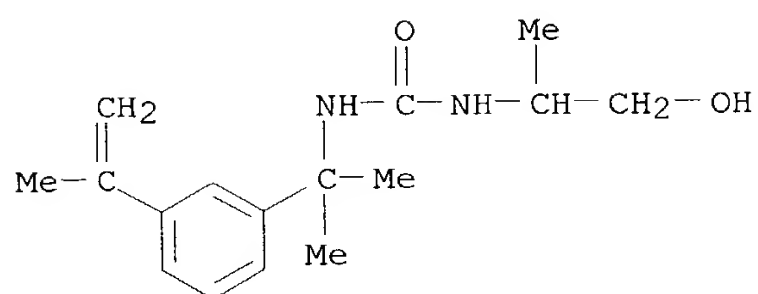
CRN 376356-71-7

CMF C16 H24 N2 O2 . (C3 H6 O . C2 H4 O)x . C H4 O

CM 12

CRN 376356-70-6

CMF C16 H24 N2 O2



CM 13

CRN 67-56-1

CMF C H4 O

H<sub>3</sub>C-OH

CM 14

CRN 9003-11-6

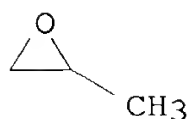
CMF (C3 H6 O . C2 H4 O) x

CCI PMS

CM 15

CRN 75-56-9

CMF C3 H6 O



CM 16

CRN 75-21-8

CMF C2 H4 O



RN 376356-90-0 HCAPLUS

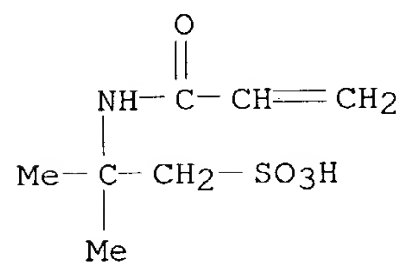
CN 1,3-Benzenedicarboxylic acid, polymer with 1,4-cyclohexanedimethanol, decanedioic acid, 2,2-dimethyl-1,3-propanediol, 2-ethyl-2-(hydroxymethyl)-1,3-propanediol and methylenebutanedioic acid, 2-hydroxy-3-[(1-oxoneodecyl)oxy]propyl ester, polymer with ethenylbenzene, 2-ethylhexyl 2-propenoate, 2-hydroxyethyl 2-methyl-2-propenoate, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane, methyloxirane polymer with oxirane methyl 2-[[[1-methyl-1-[3-(1-methylethenyl)phenyl]ethyl]amino]carbonyl]amino]propyl ether, 2-methyl-2-[(1-oxo-2-propenyl)amino]-1-

propanesulfonic acid and 2-propenoic acid (9CI) (CA INDEX NAME)

CM 1

CRN 15214-89-8

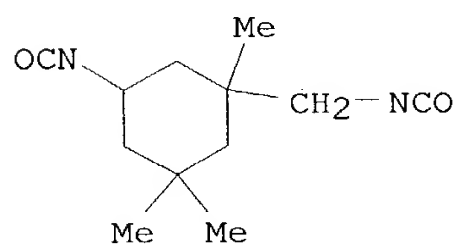
CMF C7 H13 N O4 S



CM 2

CRN 4098-71-9

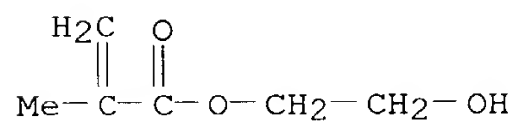
CMF C12 H18 N2 O2



CM 3

CRN 868-77-9

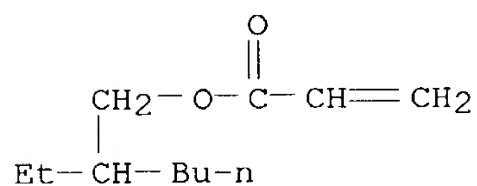
CMF C6 H10 O3



CM 4

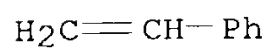
CRN 103-11-7

CMF C11 H20 O2



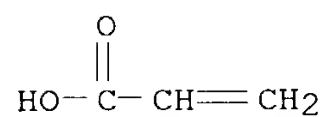
CM 5

CRN 100-42-5  
CMF C8 H8



CM 6

CRN 79-10-7  
CMF C3 H4 O2

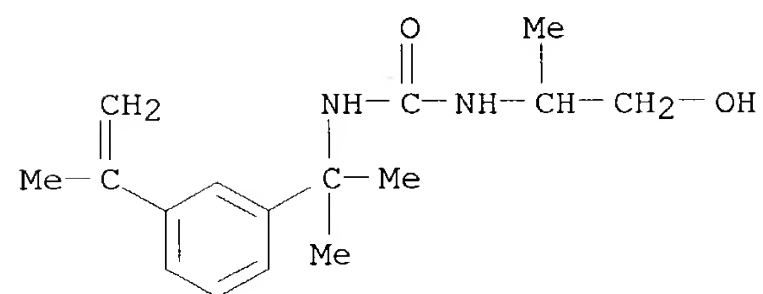


CM 7

CRN 376356-71-7  
CMF C16 H24 N2 O2 . (C3 H6 O . C2 H4 O)x . C H4 O

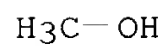
CM 8

CRN 376356-70-6  
CMF C16 H24 N2 O2



CM 9

CRN 67-56-1  
CMF C H4 O



CM 10

CRN 9003-11-6

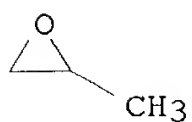


CMF (C3 H6 O . C2 H4 O)x  
CCI PMS

CM 11

CRN 75-56-9

CMF C3 H6 O



CM 12

CRN 75-21-8

CMF C2 H4 O



CM 13

CRN 376356-55-7

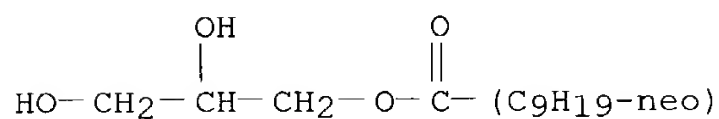
CMF C13 H26 O4 . x (C10 H18 O4 . C8 H16 O2 . C8 H6 O4 . C6 H14 O3 . C5 H12 O2 . C5 H6 O4)x

CM 14

CRN 79245-77-5

CMF C13 H26 O4

CCI IDS



CM 15

CRN 375824-12-7

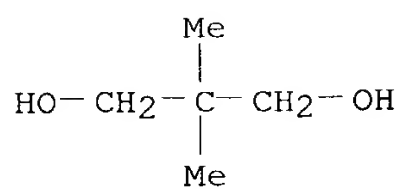
CMF (C10 H18 O4 . C8 H16 O2 . C8 H6 O4 . C6 H14 O3 . C5 H12 O2 . C5 H6 O4)x

CCI PMS

CM 16

CRN 126-30-7

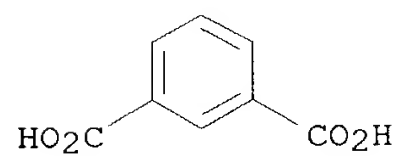
CMF C5 H12 O2



CM 17

CRN 121-91-5

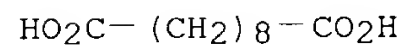
CMF C8 H6 O4



CM 18

CRN 111-20-6

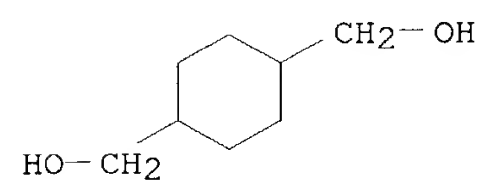
CMF C10 H18 O4



CM 19

CRN 105-08-8

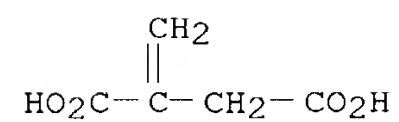
CMF C8 H16 O2



CM 20

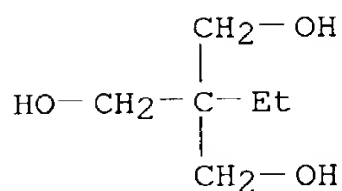
CRN 97-65-4

CMF C5 H6 O4



CM 21

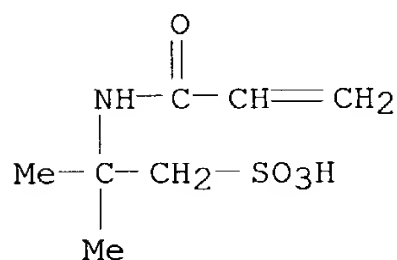
CRN 77-99-6  
CMF C6 H14 O3



RN 376356-95-5 HCAPLUS  
CN 1,3-Benzenedicarboxylic acid, polymer with 1,4-cyclohexanedimethanol, decanedioic acid, 2-ethyl-2-(hydroxymethyl)-1,3-propanediol and methylenebutanedioic acid, 2-hydroxy-3-[(1-oxoneodecyl)oxy]propyl ester, polymer with ethenylbenzene, 2-ethylhexyl 2-propenoate, 2-hydroxyethyl 2-methyl-2-propenoate, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane, methyloxirane polymer with oxirane methyl 2-[[[[[1-methyl-1-[3-(1-methylethenyl)phenyl]ethyl]amino]carbonyl]amino]propyl ether, 2-methyl-2-[(1-oxo-2-propenyl)amino]-1-propanesulfonic acid and 2-propenoic acid (9CI) (CA INDEX NAME)

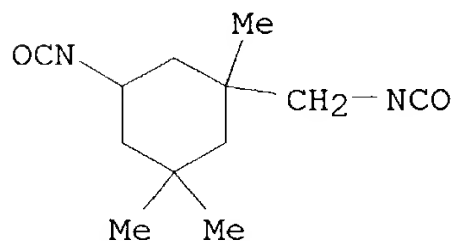
CM 1

CRN 15214-89-8  
CMF C7 H13 N O4 S



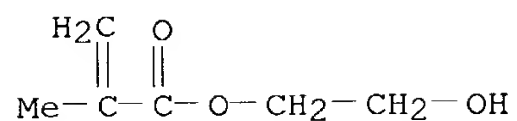
CM 2

CRN 4098-71-9  
CMF C12 H18 N2 O2



CM 3

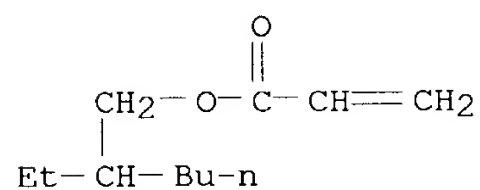
CRN 868-77-9  
CMF C6 H10 O3



CM 4

CRN 103-11-7

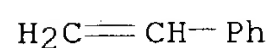
CMF C11 H20 O2



CM 5

CRN 100-42-5

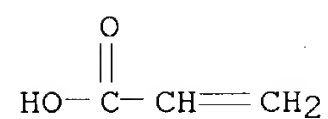
CMF C8 H8



CM 6

CRN 79-10-7

CMF C3 H4 O2



CM 7

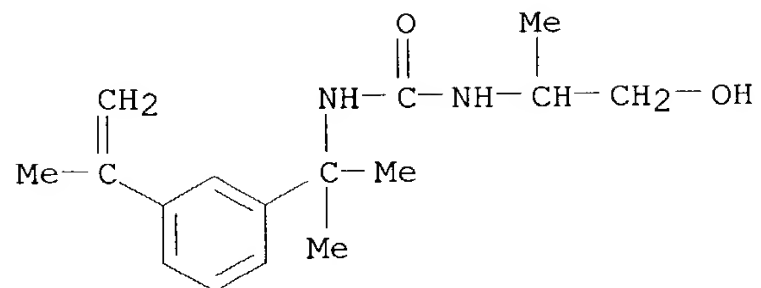
CRN 376356-71-7

CMF C16 H24 N2 O2 . (C3 H6 O . C2 H4 O)x . C H4 O

CM 8

CRN 376356-70-6

CMF C16 H24 N2 O2



CM 9

CRN 67-56-1

CMF C H4 O

H<sub>3</sub>C-OH

CM 10

CRN 9003-11-6

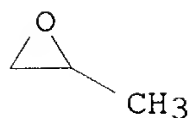
CMF (C3 H6 O . C2 H4 O) x

CCI PMS

CM 11

CRN 75-56-9

CMF C3 H6 O



CM 12

CRN 75-21-8

CMF C2 H4 O



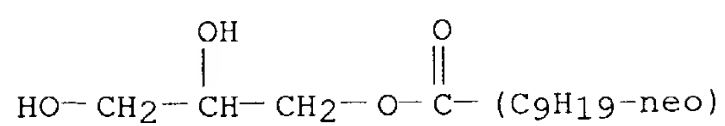
CM 13

CRN 376356-67-1

CMF C13 H26 O4 . x (C10 H18 O4 . C8 H16 O2 . C8 H6 O4 . C6 H14 O3 . C5 H6 O4) x

CM 14

CRN 79245-77-5  
CMF C13 H26 O4  
CCI IDS

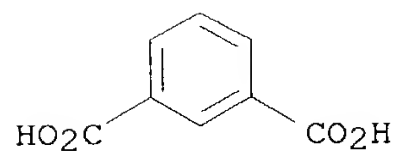


CM 15

CRN 376356-66-0  
CMF (C10 H18 O4 . C8 H16 O2 . C8 H6 O4 . C6 H14 O3 . C5 H6 O4) x  
CCI PMS

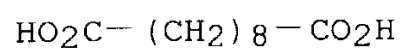
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CRN 121-91-5  
CMF C8 H6 O4



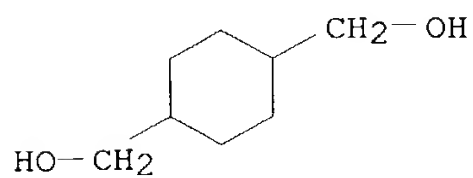
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CRN 111-20-6  
CMF C10 H18 O4



CM 18

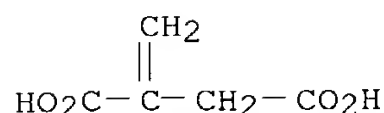
CRN 105-08-8  
CMF C8 H16 O2



CM 19

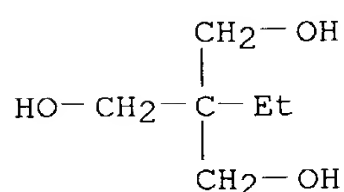
CRN 97-65-4

CMF C5 H6 O4



CM 20

CRN 77-99-6  
CMF C6 H14 O3



RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L56 ANSWER 10 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2001:788884 HCAPLUS

DN 135:345443

TI **Acrylic** polymer syrup compositions with good curability and long  
pot life and **water**-permeable pavements using them

IN Furukawa, Takuya; Takasu, Mikio

PA Mitsubishi Rayon Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 11 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001302713	A2	20011031	JP 2000-118294	20000419
PRAI	JP 2000-118294		20000419		
AB	The compns. contain vinyl monomers mainly comprising (meth) <b>acrylates</b> , <b>acrylic</b> polymers and/or radically polymerizable oligomers, hydroperoxides and/or ketone peroxides as polymerization initiators, and polyvalent metal salts as <b>crosslinking</b> catalysts. Thus, a composition containing Me <b>methacrylate</b> , 2-ethylhexyl <b>acrylate</b> , Aronix M 1600 (urethane <b>acrylate</b> ), Percumyl P (diisopropylbenzene hydroperoxide), and Naphthex Co 8%T (Co naphthenate) had workable pot life and gave cured test piece with flexural strength 3.0 MPa, compressive strength 2.3 MPa, and good weather resistance.				
IC	ICM C08F002-44				
	ICS C08F265-06; C08F290-06; C08K005-00; C08K005-098; C08K005-101; C08K005-14; C08L033-06; E01C007-30; C08L091-06				
CC	38-3 (Plastics Fabrication and Uses) Section cross-reference(s): 37, <b>42</b> , 58				
ST	<b>acrylic polyurethane</b> syrup <b>water</b> permeable pavement; isopropylbenzene hydroperoxide initiator <b>acrylic</b>				

- polyurethane curability; cobalt naphthenate **crosslinking**  
catalyst **acrylic** polyurethane; pot life **acrylic**  
polyurethane ketone peroxide initiator
- IT **Epoxy** resins, uses  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); RCT  
(Reactant); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)  
(**acrylates; acrylic** polymer syrup compns. with good  
curability and long pot life for **water**-permeable pavements)
- IT Paving materials  
(**acrylic** polymer syrup compns. with good curability and long  
pot life for **water**-permeable pavements)
- IT Polyurethanes, uses  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or  
engineered material use); PREP (Preparation); USES (Uses)  
(**acrylic; acrylic** polymer syrup compns. with good  
curability and long pot life for **water**-permeable pavements)
- IT Naphthenic acids, uses  
RL: CAT (Catalyst use); USES (Uses)  
(cobalt salts, Naphthex Co; **acrylic** polymer syrup compns.  
with good curability and long pot life for **water**-permeable  
pavements)
- IT Polyoxyalkylenes, uses  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or  
engineered material use); PREP (Preparation); USES (Uses)  
(**epoxy, acrylic; acrylic** polymer syrup  
compns. with good curability and long pot life for **water**  
-permeable pavements)
- IT Polyurethanes, uses  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); RCT  
(Reactant); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)  
(polycarbonate-, **acrylate**-terminated; **acrylic**  
polymer syrup compns. with good curability and long pot life for  
**water**-permeable pavements)
- IT Polyurethanes, uses  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or  
engineered material use); PREP (Preparation); USES (Uses)  
(polycarbonate-, **acrylic; acrylic** polymer syrup  
compns. with good curability and long pot life for **water**  
-permeable pavements)
- IT Polyurethanes, uses  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or  
engineered material use); PREP (Preparation); USES (Uses)  
(polycarbonate-**polyester**-, **acrylic; acrylic**  
polymer syrup compns. with good curability and long pot life for  
**water**-permeable pavements)
- IT Polyurethanes, uses  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); RCT  
(Reactant); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)  
(polycarbonate-**polyester**-, block, **acrylate**  
-terminated; **acrylic** polymer syrup compns. with good  
curability and long pot life for **water**-permeable pavements)
- IT **Polyesters**, uses  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or  
engineered material use); PREP (Preparation); USES (Uses)  
(polycarbonate-polyurethane-, **acrylic; acrylic**  
polymer syrup compns. with good curability and long pot life for  
**water**-permeable pavements)
- IT **Polyesters**, uses



- RL: IMF (Industrial manufacture); POF (Polymer in formulation); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)  
(polycarbonate-polyurethane-, block, **acrylate**-terminated;  
**acrylic** polymer syrup compns. with good curability and long pot life for **water**-permeable pavements)
- IT Polyurethanes, uses  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)  
(**polyester**-, **acrylate**-terminated; **acrylic** polymer syrup compns. with good curability and long pot life for **water**-permeable pavements)
- IT Polyurethanes, uses  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(**polyester**-, **acrylic**; **acrylic** polymer syrup compns. with good curability and long pot life for **water**-permeable pavements)
- IT Polycarbonates, uses  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(**polyester**-polyurethane-, **acrylic**; **acrylic** polymer syrup compns. with good curability and long pot life for **water**-permeable pavements)
- IT Polycarbonates, uses  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)  
(**polyester**-polyurethane-, block, **acrylate**-terminated; **acrylic** polymer syrup compns. with good curability and long pot life for **water**-permeable pavements)
- IT **Epoxy** resins, uses  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polyoxyalkylene-, **acrylic**; **acrylic** polymer syrup compns. with good curability and long pot life for **water**-permeable pavements)
- IT Polycarbonates, uses  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)  
(polyurethane-, **acrylate**-terminated; **acrylic** polymer syrup compns. with good curability and long pot life for **water**-permeable pavements)
- IT Polycarbonates, uses  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polyurethane-, **acrylic**; **acrylic** polymer syrup compns. with good curability and long pot life for **water**-permeable pavements)
- IT **Crosslinking** catalysts  
(polyvalent metal salts; **acrylic** polymer syrup compns. with good curability and long pot life for **water**-permeable pavements)
- IT Salts, uses  
RL: CAT (Catalyst use); USES (Uses)  
(polyvalent, **crosslinking** catalysts; **acrylic** polymer syrup compns. with good curability and long pot life for **water**-permeable pavements)
- IT Polymerization catalysts  
(radical, hydroperoxides and ketone peroxides; **acrylic**

polymer syrup compns. with good curability and long pot life for  
**water**-permeable pavements)

IT 60097-73-6DP, reaction products with isocyanate-terminated polyurethanes  
 and **acrylic** compds. 371172-47-3P 371172-49-5P  
 371172-51-9DP, reaction products with OH-containing **acrylic** polymers  
 and **acrylic** compds. **371172-54-2DP**, reaction products  
 with OH-containing **acrylic** polymers 371172-56-4P  
**371209-31-3DP**, reaction products with OH-containing **acrylic**  
 polymers  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); RCT  
 (Reactant); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)  
 (**acrylic** polymer syrup compns. with good curability and long  
 pot life for **water**-permeable pavements)

IT 24980-41-4DP, Polycaprolactone, diol derivs., polymers with TDI,  
**acrylic** polymers and **acrylates** 25248-42-4DP,  
 Polycaprolactone, diol derivs., polymers with TDI, **acrylic**  
 polymers and **acrylates** 371172-58-6P **371172-59-7P**  
**371209-34-6P** 371209-37-9P 371209-40-4P  
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or  
 engineered material use); PREP (Preparation); USES (Uses)  
 (**acrylic** polymer syrup compns. with good curability and long  
 pot life for **water**-permeable pavements)

IT 80-15-9, Trigonox R 239A  
 RL: CAT (Catalyst use); USES (Uses)  
 (polymerization initiators, Trigonox R 239A; **acrylic** polymer syrup  
 compns. with good curability and long pot life for **water**  
 -permeable pavements)

IT 98-49-7, Percumyl P 1338-23-4, Permex N.  
 RL: CAT (Catalyst use); USES (Uses)  
 (polymerization initiators; **acrylic** polymer syrup compns. with good  
 curability and long pot life for **water**-permeable pavements)

IT **371172-54-2DP**, reaction products with OH-containing **acrylic**  
 polymers **371209-31-3DP**, reaction products with OH-containing  
**acrylic** polymers  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); RCT  
 (Reactant); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)  
 (**acrylic** polymer syrup compns. with good curability and long  
 pot life for **water**-permeable pavements)

RN 371172-54-2 HCAPLUS  
 CN Coronate T 80, polymer with Placel 205 (9CI) (CA INDEX NAME)

CM 1

CRN 94188-96-2  
 CMF Unspecified  
 CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 2

CRN 91825-07-9  
 CMF Unspecified  
 CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RN 371209-31-3 HCAPLUS  
 CN Hexanedioic acid, polymer with carbonic acid, Coronate T 80,

1,6-hexanediol and 3-methyl-1,5-pentanediol (9CI) (CA INDEX NAME)

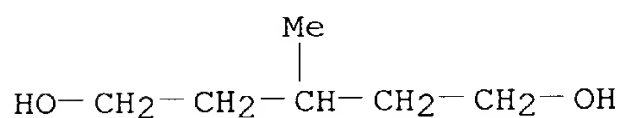
CM 1

CRN 91825-07-9  
CMF Unspecified  
CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

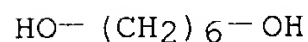
CM 2

CRN 4457-71-0  
CMF C6 H14 O2



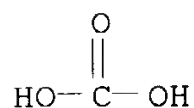
CM 3

CRN 629-11-8  
CMF C6 H14 O2



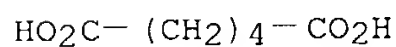
CM 4

CRN 463-79-6  
CMF C H2 O3



CM 5

CRN 124-04-9  
CMF C6 H10 O4



IT 371172-59-7P 371209-34-6P

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(**acrylic** polymer syrup compns. with good curability and long pot life for **water**-permeable pavements)

RN 371172-59-7 HCAPLUS  
 CN Butanoic acid, 3-oxo-, 2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl ester,  
 polymer with Coronate T 80, Dianal BR 83, 2-(dimethylamino)ethyl  
 2-methyl-2-propenoate, 2-hydroxyethyl 2-propenoate, methyl  
 2-methyl-2-propenoate and Placel 205 (9CI) (CA INDEX NAME)

CM 1

CRN 94188-96-2  
 CMF Unspecified  
 CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 2

CRN 91825-07-9  
 CMF Unspecified  
 CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

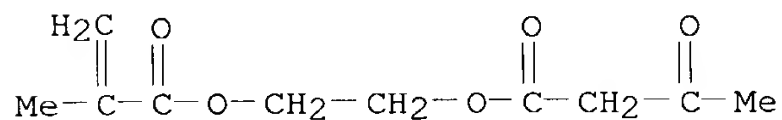
CM 3

CRN 70563-26-7  
 CMF Unspecified  
 CCI MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

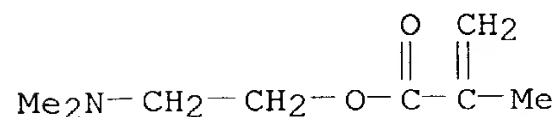
CM 4

CRN 21282-97-3  
 CMF C10 H14 O5



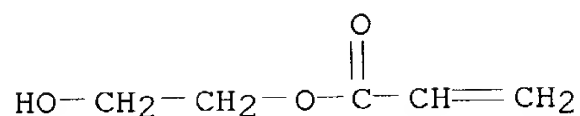
CM 5

CRN 2867-47-2  
 CMF C8 H15 N O2



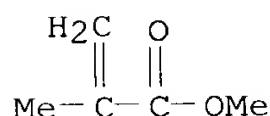
CM 6

CRN 818-61-1  
 CMF C5 H8 O3



CM 7

CRN 80-62-6  
CMF C5 H8 O2



RN 371209-34-6 HCAPLUS  
CN Hexanedioic acid, polymer with carbonic acid, Coronate T 80, Dianal BR 83, 2-(dimethylamino)ethyl 2-methyl-2-propenoate, 2-ethylhexyl 2-propenoate, 1,6-hexanediol, 2-hydroxyethyl 2-methyl-2-propenoate, methyl 2-methyl-2-propenoate, 2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl 3-oxobutanoate and 3-methyl-1,5-pentanediol (9CI) (CA INDEX NAME)

CM 1

CRN 91825-07-9  
CMF Unspecified  
CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

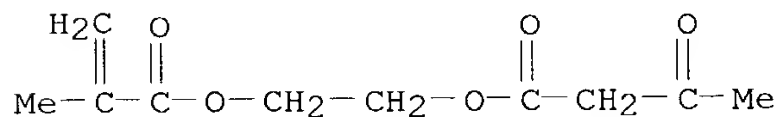
CM 2

CRN 70563-26-7  
CMF Unspecified  
CCI MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

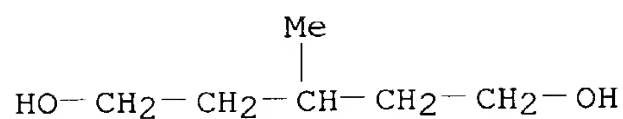
CM 3

CRN 21282-97-3  
CMF C10 H14 O5



CM 4

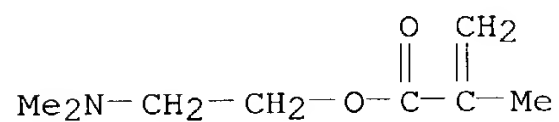
CRN 4457-71-0  
CMF C6 H14 O2



CM 5

CRN 2867-47-2

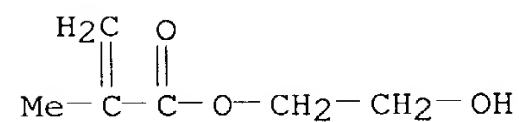
CMF C8 H15 N O2



CM 6

CRN 868-77-9

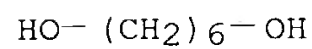
CMF C6 H10 O3



CM 7

CRN 629-11-8

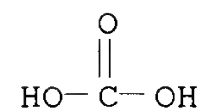
CMF C6 H14 O2



CM 8

CRN 463-79-6

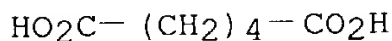
CMF C H2 O3



CM 9

CRN 124-04-9

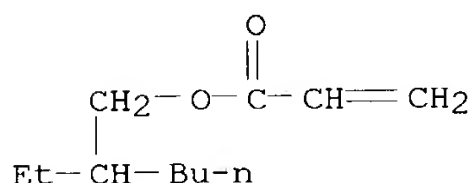
CMF C6 H10 O4



CM 10

CRN 103-11-7

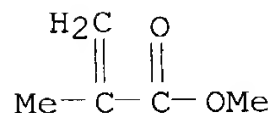
CMF C11 H20 O2



CM 11

CRN 80-62-6

CMF C5 H8 O2



L56 ANSWER 11 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN  
 AN 2001:676869 HCAPLUS  
 DN 135:228305  
 TI **Aqueous** acrylic polymer **coating** compositions  
 IN Overbeek, Gerardus Cornelis; Tennebroek, Ronald; Nabuurs, Tijs;  
 Steenwinkel, Pablo  
 PA Avecia B.V., Neth.  
 SO PCT Int. Appl., 45 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001066659	A2	20010913	WO 2001-EP2450	20010305
	WO 2001066659	A3	20020321		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	EP 1268690	A2	20030102	EP 2001-923630	20010305

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
IE, SI, LT, LV, FI, RO, MK, CY, AL, TR

US 2003055171 A1 20030320 US 2002-220141 20020828  
PRAI GB 2000-5612 A 20000309  
WO 2001-EP2450 W 20010305

AB An **aqueous** polymer composition suitable for **coating** comprises the following components dispersed in **water**: (1) a combination of an acrylic polymer(s) (A) and an acrylic polymer(s) (B) where polymer(s) (A) has a Tg of not more than 30° and polymer(s) (B) has a Tg of at least 35°, more preferably at least 45°, which is at least 25° higher than the Tg of polymer(s) (A), and wherein one or both polymer(s) (A and B) bear **crosslinker** functional groups capable of imparting ambient-temperature **crosslinkability** to component (1) in a **coating** formed from the composition via the formation of non-radically-formed covalent bonds; and (2) a self-dispersible, ionically stabilized polymer having olefinically unsatd. bond functionality capable of imparting radiation-curability (preferably UV-radiation curability) thereto in a **coating** formed from the composition. A composition contained an acrylic polymer mixture containing diacetone acrylamide-Et acrylate-methacrylic acid-Me methacrylate copolymer ammonium salt and Bu acrylate-Bu methacrylate-diacetone acrylamide copolymer and CN104-dimethylol propionic acid-isophorone diisocyanate-S-1063-120 copolymer.

IC ICM C09D133-00  
CC 42-10 (**Coatings**, Inks, and Related Products)  
ST acrylic polymer polyurethane **aq** curable **coating**  
IT Acrylic polymers, uses  
Polyurethanes, uses  
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
(**aqueous** acrylic polymer **coating** compns.)

IT **Coating** materials  
(**water**-thinned; **aqueous** acrylic polymer **coating** compns.)

IT 75-55-8DP, reaction products with Et acrylate-methacrylic acid-Me methacrylate copolymer 818-61-1DP, 2-Hydroxyethyl acrylate, acrylic polyurethanes 4098-71-9DP, Isophorone diisocyanate, acrylic polyurethanes 9004-74-4DP, Methoxypolyethylene glycol, acrylic polyurethanes 25133-97-5DP, Ethyl acrylate-methacrylic acid-methyl methacrylate copolymer, reaction products with propylene imine 29035-74-3P, Butyl acrylate-butyl methacrylate copolymer 95013-93-7DP, reaction products with propylene imine 96283-84-0P 173091-76-4P 179748-40-4P **358738-20-2P** 359414-58-7DP, Oxyflex S 1132-110, acrylic polyurethanes  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(**aqueous** acrylic polymer **coating** compns.)

IT 75577-70-7, Sartomer SR-454  
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
(**aqueous** acrylic polymer **coating** compns.)

IT **358738-20-2P**  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(**aqueous** acrylic polymer **coating** compns.)

RN 358738-20-2 HCAPLUS



CN Propanoic acid, 3-hydroxy-2-(hydroxymethyl)-2-methyl-, polymer with (chloromethyl)oxirane polymer with 4,4'-(1-methylethylidene)bis[phenol] di-2-propenoate, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane and Oxyflex S 1063-120 (9CI) (CA INDEX NAME)

CM 1

CRN 126040-53-7

CMF Unspecified

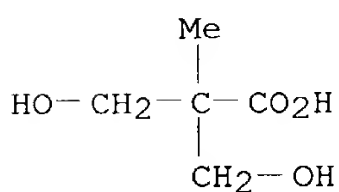
CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 2

CRN 4767-03-7

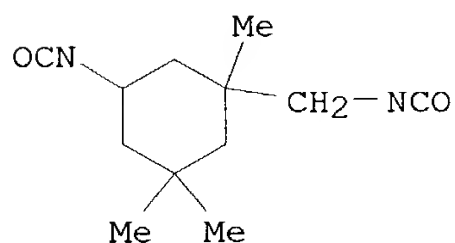
CMF C5 H10 O4



CM 3

CRN 4098-71-9

CMF C12 H18 N2 O2



CM 4

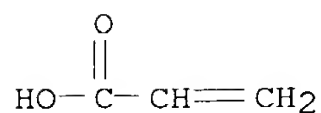
CRN 53814-24-7

CMF (C15 H16 O2 . C3 H5 Cl O)x . 2 C3 H4 O2

CM 5

CRN 79-10-7

CMF C3 H4 O2

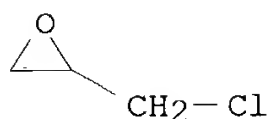


CM 6

CRN 25068-38-6  
CMF (C15 H16 O2 . C3 H5 Cl O)x  
CCI PMS

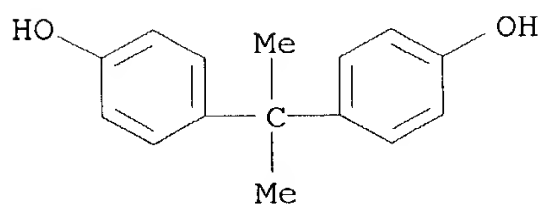
CM 7

CRN 106-89-8  
CMF C3 H5 Cl O



CM 8

CRN 80-05-7  
CMF C15 H16 O2



L56 ANSWER 12 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN  
AN 2001:319523 HCAPLUS  
DN 134:327985  
TI Biodegradable **water**-based polymer compositions containing  
biopolymers and polymers for **coatings** and inks  
IN Colpaert, Marc; Bontinck, Dirk; Roose, Patrice  
PA Ucb, S.A., Belg.  
SO Eur. Pat. Appl., 14 pp.  
CODEN: EPXXDW  
DT Patent  
LA English  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1095977	A1	20010502	EP 1999-121449	19991028
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	WO 2001030905	A1	20010503	WO 2000-EP10503	20001028
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,				

DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ,  
CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

JP 2003513133 T2 20030408 JP 2001-533893 20001028

PRAI EP 1999-121449 A 19991028

WO 2000-EP10503 W 20001028

AB The composition having good storage stability comprises a biopolymer, particularly in form of nanoparticles, resulting from a mech. thermoplastic processing of a polysaccharide and/or protein starting material using shear forces in the presence of a **crosslinking** agent, and a synthetic polymer consisting of a **water**-based hydrophilic polymer and/or hydrophilic/hydrophobic polymer. Thus, 18% starch dispersion obtained from extrusion-modified potato starch was mixed with 35% **polyester-urethane** polymer **aqueous** dispersion derived from polycaprolactone and trimethylxylene diisocyanate to give a mixture with dry solid content 27% and dry starch content 8.1% having particle diameter 270 nm initially, and 321 nm after 28 days.

IC ICM C08L003-04

ICS C08L089-00; C08L001-02; C08L005-00; C09D103-04; C09D011-00

CC 42-10 (**Coatings**, Inks, and Related Products)

Section cross-reference(s): 44

ST **polyester** polyurethane starch **coating** biodegrdn;

biopolymer compn **water** thinned ink

IT Glutens

RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)

(Wheat; biodegradable **water**-based polymer compns. containing biopolymers and polymers for **coatings** and inks)

IT **Epoxy** resins, uses

Polyamides, uses

Polyamines

**Polyesters**, uses

**Polyurethanes**, uses

RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)

(**acrylic**; biodegradable **water**-based polymer compns. containing biopolymers and polymers for **coatings** and inks)

IT Biodegradable materials

Gums and Mucilages

(biodegradable **water**-based polymer compns. containing biopolymers and polymers for **coatings** and inks)

IT Biopolymers

RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(biodegradable **water**-based polymer compns. containing biopolymers and polymers for **coatings** and inks)

IT Alkyd resins

Gelatins, uses

**Polyesters**, uses

Polyethers, uses

**Polyurethanes**, uses

Proteins, general, uses

RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)

(biodegradable **water**-based polymer compns. containing biopolymers and polymers for **coatings** and inks)

IT Potato (*Solanum tuberosum*)

Rice (*Oryza sativa*)

(biopolymers derived from)

- IT Styrene-butadiene rubber, uses  
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
 (carboxy-containing, Tylac 029, Tylac 757, Tylac 936; biodegradable **water**-based polymer compns. containing biopolymers and polymers for **coatings** and inks)
- IT **Polyurethanes**, uses  
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
 (**polyester**-; biodegradable **water**-based polymer compns. containing biopolymers and polymers for **coatings** and inks)
- IT Aldehydes, uses  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (polyfunctional, **crosslinking** agents; biodegradable **water**-based polymer compns. containing biopolymers and polymers for **coatings** and inks)
- IT **Coating** materials  
 Inks  
 (**water**-thinned; biodegradable **water**-based polymer compns. containing biopolymers and polymers for **coatings** and inks)
- IT Corn  
 (waxy; biopolymers derived from)
- IT 9005-25-8P, Starch, uses  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (biodegradable **water**-based polymer compns. containing biopolymers and polymers for **coatings** and inks)
- IT 4687-94-9, Ebecryl 3700 5124-30-1D, polymers with fatty acid **polyester** polyols 9002-89-5, Polyvinyl alcohol 9003-19-4, Polyvinyl ether 9003-20-7, Poly(vinyl acetate) 9003-55-8, Butadiene-styrene copolymer 9004-34-6, Cellulose, uses 9005-25-8D, Starch, derivs., uses 9034-32-6, Hemicellulose 24937-78-8, Ethylene-vinyl acetate copolymer 24980-41-4D, Polycaprolactone, diol derivs., polymers with polyisocyanates 25067-34-9, Ethylene-vinyl alcohol copolymer 25087-26-7, Poly(meth)**acrylic** acid 25248-42-4D, Polycaprolactone, diol derivs., polymers with polyisocyanates 26300-51-6, **Acrylic** acid-butyl **acrylate**-methyl **methacrylate** copolymer 37522-93-3 58067-42-8D, Tetramethylxylylene diisocyanate, polymers with polycaprolactone polyols 133579-18-7 146186-13-2 223776-12-3, Beckopox EP 385W  
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
 (biodegradable **water**-based polymer compns. containing biopolymers and polymers for **coatings** and inks)
- IT 107-22-2, Glyoxal  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (**crosslinking** agents; biodegradable **water**-based polymer compns. containing biopolymers and polymers for **coatings** and inks)
- IT 9003-55-8  
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
 (styrene-butadiene rubber, carboxy-containing, Tylac 029, Tylac 757, Tylac 936; biodegradable **water**-based polymer compns. containing biopolymers and polymers for **coatings** and inks)
- IT **37522-93-3**

RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)

(biodegradable **water**-based polymer compns. containing biopolymers and polymers for **coatings** and inks)

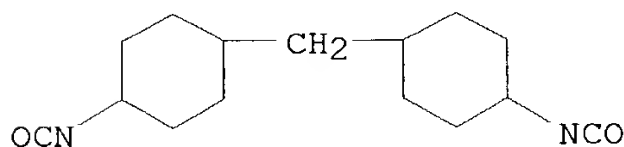
RN 37522-93-3 HCAPLUS

CN Hexanedioic acid, polymer with 2,2-dimethyl-1,3-propanediol and 1,1'-methylenebis[4-isocyanatocyclohexane] (9CI) (CA INDEX NAME)

CM 1

CRN 5124-30-1

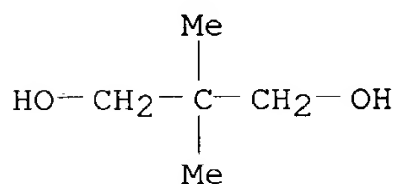
CMF C15 H22 N2 O2



CM 2

CRN 126-30-7

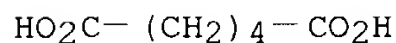
CMF C5 H12 O2



CM 3

CRN 124-04-9

CMF C6 H10 O4



RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L56 ANSWER 13 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2001:36943 HCAPLUS

DN 134:117223

TI **Aqueous coating** materials forming smooth surfaces and having good recoatability

IN Ikeda, Hidekazu; Ishihara, Mitsuru; Matsushashi, Yuki

PA Toyo Ink Mfg. Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 14 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001011384	A2	20010116	JP 1999-181217	19990628
PRAI	JP 1999-181217		19990628		
AB	<b>Coating</b> materials contain <b>aqueous</b> resins having no organopolysiloxane chains, curing agents, polyorganopolysiloxanes, and polymers nonreactive to the <b>aqueous</b> resins and curing agents. Thus, a <b>coating</b> material contained <b>acrylic acid-N-butoxymethyl methacrylate-Et acrylate -2-hydroxyethyl acrylate-Me methacrylate-styrene copolymer dimethylethanolamine salt 29 (solids), ethylene glycol-isophthalic acid-phthalic anhydride-trimethylolpropane copolymer dimethylethanolamine salt 20, bisphenol A diglycidyl ether phosphate dimethylethanolamine salt 2, MEK-blocked hexamethylene diisocyanate-isophorone diisocyanate-polypropylene glycol copolymer 48, FM 0711 (a silicone acrylic monomer)-methoxynonaethylene glycol monomethacrylate copolymer 1, a sulfonic acid catalyst 0.2, additives 1, butyl Cellosolve, and water.</b>				
IC	ICM C09D183-07 ICS C09D005-00; C09D133-00; C09D163-00; C09D167-02; C09D175-04; C09D201-00				
CC	42-10 ( <b>Coatings, Inks, and Related Products</b> )				
ST	<b>acrylic polyester epoxy resin aq coating material; polyisocyanate crosslinking agent aq coating; silicone polyethylene glycol methacrylate aq coating</b>				
IT	Macromonomers RL: RCT (Reactant); RACT (Reactant or reagent) ( <b>acrylic silicone; aqueous coating materials</b> )				
IT	Polysiloxanes, reactions RL: RCT (Reactant); RACT (Reactant or reagent) ( <b>acrylic; aqueous coating materials</b> )				
IT	<b>Crosslinking agents</b> ( <b>aqueous coating materials containing acrylic resins and polyesters and epoxy resins and crosslinking agents and silicones</b> )				
IT	<b>Polyurethanes, uses</b> RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses) ( <b>aqueous coating materials containing acrylic resins and polyesters and epoxy resins and crosslinking agents and silicones</b> )				
IT	<b>Polyesters, uses</b> Polysiloxanes, uses RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) ( <b>aqueous coating materials containing acrylic resins and polyesters and epoxy resins and crosslinking agents and silicones</b> )				
IT	<b>Epoxy resins, uses</b> RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses) ( <b>aqueous coating materials containing acrylic resins and polyesters and epoxy resins and crosslinking agents and silicones</b> )				
IT	Vinyl compounds, uses RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM				

(Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (polymers; **aqueous coating** materials containing  
**acrylic** resins and **polyesters** and **epoxy**  
 resins and **crosslinking** agents and silicones)

IT **Acrylic** polymers, reactions  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (polysiloxane-; **aqueous coating** materials)

IT **Coating** materials  
 (**water**-thinned; **aqueous coating** materials  
 containing **acrylic** resins and **polyesters** and  
**epoxy** resins and **crosslinking** agents and silicones)

IT 78-93-3DP, MEK, -blocked **polyurethanes**, uses  
**185392-68-1DP**, MEK-blocked  
 RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP  
 (Preparation); USES (Uses)  
 (**aqueous coating** materials containing **acrylic**  
 resins and **polyesters** and **epoxy** resins and  
**crosslinking** agents and silicones)

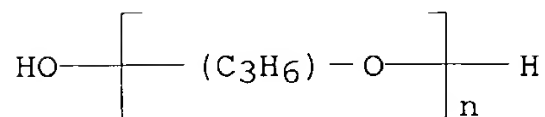
IT 258329-52-1P 320727-28-4P 320727-29-5P 320727-30-8P 320727-31-9P  
 320727-32-0P 320727-33-1P 320727-34-2DP, trimethylsilyl-terminated  
 320727-35-3DP, trimethylsilyl-terminated 320783-65-1P  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM  
 (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (**aqueous coating** materials containing **acrylic**  
 resins and **polyesters** and **epoxy** resins and  
**crosslinking** agents and silicones)

IT **185392-68-1DP**, MEK-blocked  
 RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP  
 (Preparation); USES (Uses)  
 (**aqueous coating** materials containing **acrylic**  
 resins and **polyesters** and **epoxy** resins and  
**crosslinking** agents and silicones)

RN 185392-68-1 HCAPLUS  
 CN Poly[oxy(methyl-1,2-ethanediyl)],  $\alpha$ -hydro- $\omega$ -hydroxy-, polymer  
 with 1,6-diisocyanatohexane and 5-isocyanato-1-(isocyanatomethyl)-1,3,3-  
 trimethylcyclohexane (9CI) (CA INDEX NAME)

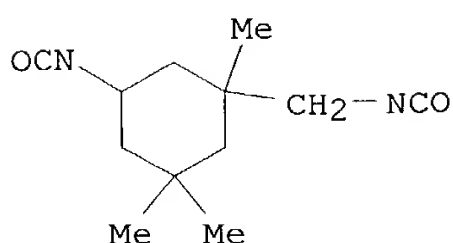
CM 1

CRN 25322-69-4  
 CMF (C3 H6 O)<sub>n</sub> H2 O  
 CCI IDS, PMS



CM 2

CRN 4098-71-9  
 CMF C12 H18 N2 O2



CM 3

CRN 822-06-0

CMF C8 H12 N2 O2

OCN- (CH<sub>2</sub>)<sub>6</sub>-NCO

L56 ANSWER 14 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2000:465252 HCAPLUS

DN 133:109039

TI Maintenance of drainage pavement using radically **crosslinkable** resin composition

IN Akiba, Kunizo; Nemoto, Nobuyuki; Sunada, Masaaki; Ikezoe, Mitsunori; Mita, Toshio; Ueno, Shinya

PA Nippon Hodo Co., Ltd., Japan; Dainippon Ink and Chemicals, Inc.

SO Jpn. Kokai Tokkyo Koho, 13 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2000192407	A2	20000711	JP 1998-367787	19981224
	JP 3374309	B2	20030204		
PRAI	JP 1998-367787		19981224		
AB	The method comprises application fo a liquid and high-solid-content radically <b>crosslinkable</b> polymer composition on the surface of continuous pores in the <b>water</b> -draining asphalt pavement layer without dissolving the surface. The polymer <b>coating</b> prevents clogging of the pores with dusts to keep the drainage characteristics for a long time.				
IC	ICM E01C007-18 ICS C09D201-00; E01C011-24; C09D163-10; C09D167-06; C09D175-14				
CC	58-4 (Cement, Concrete, and Related Building Materials) Section cross-reference(s): <b>42</b>				
ST	drainage pavement maintenance radical <b>crosslinking</b> polymer <b>coating</b> ; clogging prevention drainage pavement maintenance polymer <b>coating</b>				
IT	Polyesters, preparation RL: DEV (Device component use); PNU (Preparation, unclassified); PREP (Preparation); USES (Uses) (acrylic, reaction products with trimethylolpropane, polymers with acrylic monomers; maintenance of drainage pavement using radically <b>crosslinkable</b> resin composition)				
IT	Epoxy resins, preparation				



RL: DEV (Device component use); PNU (Preparation, unclassified); PREP (Preparation); USES (Uses)  
 (acrylic-polyester-, reaction products with trimethylolpropane, polymers with acrylic monomers; maintenance of drainage pavement using radically **crosslinkable** resin composition)

IT **Coating materials**  
 (antisoiling; maintenance of drainage pavement using radically **crosslinkable** resin composition)

IT Paving materials  
 (drainage; maintenance of drainage pavement using radically **crosslinkable** resin composition)

IT Polyurethanes, preparation  
 RL: DEV (Device component use); PNU (Preparation, unclassified); PREP (Preparation); USES (Uses)  
 (polyester-, acrylic, **crosslinked**; maintenance of drainage pavement using radically **crosslinkable** resin composition)

IT Linseed oil  
 RL: DEV (Device component use); PNU (Preparation, unclassified); PREP (Preparation); USES (Uses)  
 (reaction products with trimethylolpropane, polymers with acrylic monomers; maintenance of drainage pavement using radically **crosslinkable** resin composition)

IT 77-99-6DP, Trimethylolpropane, reaction products with linseed oil, reaction products with acrylic monomers 85-43-8DP, Tetrahydrophthalic anhydride, unsatd. polyesters, reaction products with acrylic monomers 107-21-1DP, Ethylene glycol, unsatd. polyesters, reaction products with acrylic monomers 111-46-6DP, Diethylene glycol, unsatd. polyesters, reaction products with acrylic monomers **170634-54-5P** 191598-68-2DP, reaction products with acrylic monomers **228869-75-8P** 273944-04-0DP, reaction products with acrylic monomers 282541-57-5P 282541-58-6DP, reaction products with acrylic monomers **282542-73-8P**  
 RL: DEV (Device component use); PNU (Preparation, unclassified); PREP (Preparation); USES (Uses)  
 (**crosslinked**; maintenance of drainage pavement using radically **crosslinkable** resin composition)

IT 110-17-8DP, Fumaric acid, unsatd. polyesters, reaction products with acrylic monomers  
 RL: DEV (Device component use); PNU (Preparation, unclassified); PREP (Preparation); USES (Uses)  
 (reaction products with trimethylolpropane, polymers with acrylic monomers; maintenance of drainage pavement using radically **crosslinkable** resin composition)

IT **170634-54-5P 228869-75-8P 282542-73-8P**  
 RL: DEV (Device component use); PNU (Preparation, unclassified); PREP (Preparation); USES (Uses)  
 (**crosslinked**; maintenance of drainage pavement using radically **crosslinkable** resin composition)

RN 170634-54-5 HCAPLUS

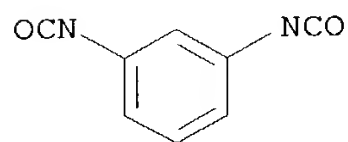
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl 2-propenoate, 1,3-diisocyanatomethylbenzene, 2-hydroxyethyl 2-propenoate, 1,1'-methylenebis[4-isocyanatobenzene] and 1,2-propanediol (9CI) (CA INDEX NAME)

CM 1

CRN 26471-62-5

CMF C9 H6 N2 O2

CCI IDS

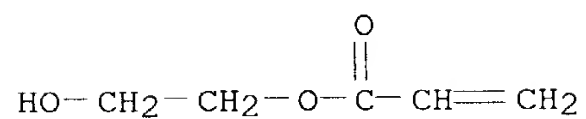


D1-Me

CM 2

CRN 818-61-1

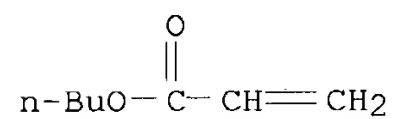
CMF C5 H8 O3



CM 3

CRN 141-32-2

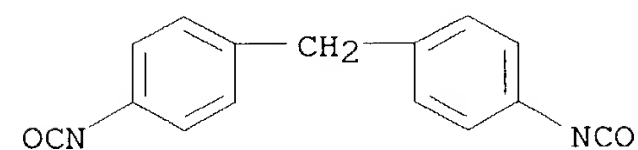
CMF C7 H12 O2



CM 4

CRN 101-68-8

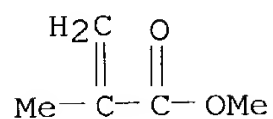
CMF C15 H10 N2 O2



CM 5

CRN 80-62-6

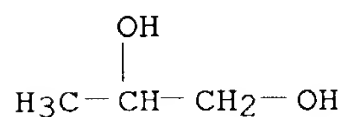
CMF C5 H8 O2



CM 6

CRN 57-55-6

CMF C3 H8 O2



RN 228869-75-8 HCAPLUS

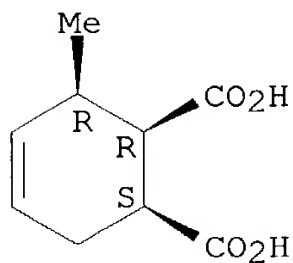
CN 4-Cyclohexene-1,2-dicarboxylic acid, 3-methyl-, (1R,2S,3S)-rel-, polymer with (chloromethyl)oxirane polymer with 4,4'-(1-methylethylidene)bis[phenol] 2-methyl-2-propenoate, 2,2'-[1,2-ethanediylbis(oxy)]bis[ethanol], 2,5-furandione, 1,3-isobenzofurandione, methyl 2-methyl-2-propenoate and 2,2'-oxybis[ethanol] (9CI) (CA INDEX NAME)

CM 1

CRN 40469-16-7

CMF C9 H12 O4

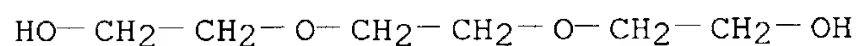
Relative stereochemistry.



CM 2

CRN 112-27-6

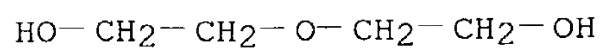
CMF C6 H14 O4



CM 3

CRN 111-46-6

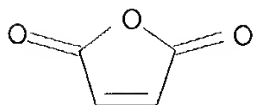
CMF C4 H10 O3



CM 4

CRN 108-31-6

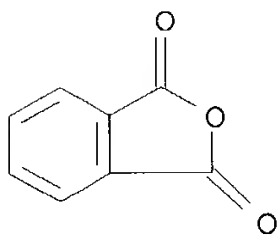
CMF C4 H2 O3



CM 5

CRN 85-44-9

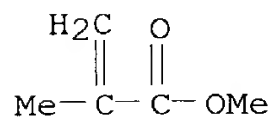
CMF C8 H4 O3



CM 6

CRN 80-62-6

CMF C5 H8 O2



CM 7

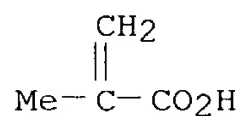
CRN 61970-25-0

CMF (C15 H16 O2 . C3 H5 Cl O)x . x C4 H6 O2

CM 8

CRN 79-41-4

CMF C4 H6 O2

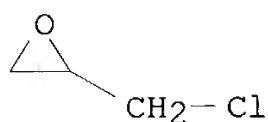


CM 9

CRN 25068-38-6  
CMF (C15 H16 O2 . C3 H5 Cl O)x  
CCI PMS

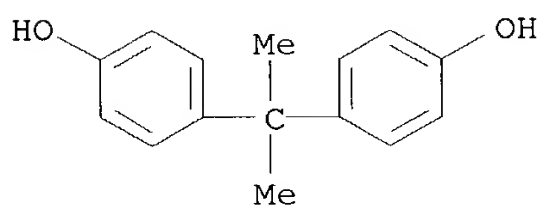
CM 10

CRN 106-89-8  
CMF C3 H5 Cl O



CM 11

CRN 80-05-7  
CMF C15 H16 O2

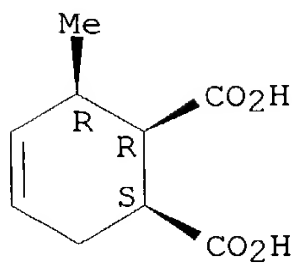


RN 282542-73-8 HCAPLUS  
CN 4-Cyclohexene-1,2-dicarboxylic acid, 3-methyl-,  
(1 $\alpha$ ,2 $\alpha$ ,3 $\alpha$ )-, polymer with (chloromethyl)oxirane polymer  
with 4,4'-(1-methylethylidene)bis[phenol] 2-methyl-2-propenoate,  
2,2'-[1,2-ethanediylbis(oxy)]bis[ethanol], 2-ethylhexyl  
2-methyl-2-propenoate, 2,5-furandione, 1,3-isobenzofurandione, methyl  
2-methyl-2-propenoate, oxiranylmethyl 2-methyl-2-propenoate and  
2,2'-oxybis[ethanol] (9CI) (CA INDEX NAME)

CM 1

CRN 40469-16-7  
CMF C9 H12 O4

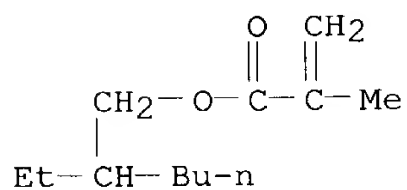
Relative stereochemistry.



CM 2

CRN 688-84-6

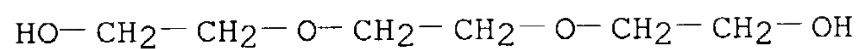
CMF C12 H22 O2



CM 3

CRN 112-27-6

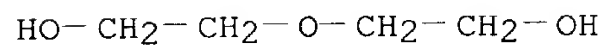
CMF C6 H14 O4



CM 4

CRN 111-46-6

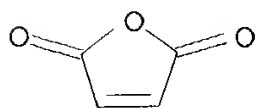
CMF C4 H10 O3



CM 5

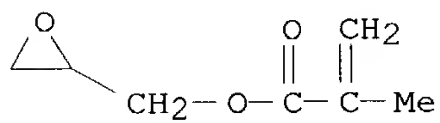
CRN 108-31-6

CMF C4 H2 O3



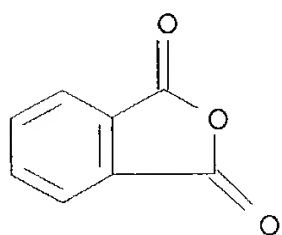
CM 6

CRN 106-91-2  
CMF C7 H10 O3



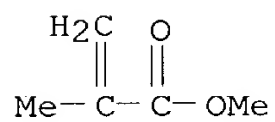
CM 7

CRN 85-44-9  
CMF C8 H4 O3



CM 8

CRN 80-62-6  
CMF C5 H8 O2

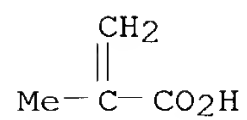


CM 9

CRN 61970-25-0  
CMF (C15 H16 O2 . C3 H5 Cl O)x . x C4 H6 O2

CM 10

CRN 79-41-4  
CMF C4 H6 O2



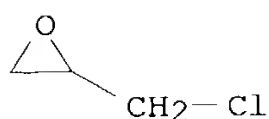
CM 11

CRN 25068-38-6

CMF (C15 H16 O2 . C3 H5 Cl O)x  
CCI PMS

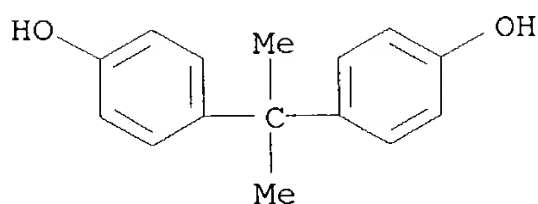
CM 12

CRN 106-89-8  
CMF C3 H5 Cl O



CM 13

CRN 80-05-7  
CMF C15 H16 O2



L56 ANSWER 15 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN  
AN 2000:121779 HCAPLUS  
DN 132:167412  
TI Tack-free polyester **films** for vapor-phase deposition of metals  
IN Utsumi, Shigeo  
PA Mitsubishi Chemical Polyester Film K. K., Japan  
SO Jpn. Kokai Tokkyo Koho, 7 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2000052503	A2	20000222	JP 1998-227976	19980812
PRAI	JP 1998-227976		19980812		

AB The **films** comprise coextruded and biaxially stretched  $\geq 2$ -layer laminated polyester **films** coated with acrylic polymer-based compns. to show the center line-average roughness (Ra) more than 0.020 and less than 0.040  $\mu\text{m}$  and haze (Ha) more than 1.0 and less than 3.0%. Thus, PET (A) containing 0.08 part amorphous SiO<sub>2</sub> with intrinsic viscosity 0.65 and PET (B) containing 0.03 part amorphous SiO<sub>2</sub> with intrinsic viscosity 0.60 were coextruded, 3.5-fold stretched to machine direction, anchor-coated with 20/70/10 **aqueous** mixture of Et acrylate-glycidyl methacrylate-methacrylic acid-Me methacrylate copolymer NH<sub>4</sub> salt, adipic acid-1,4-butanediol-dimethylolpropionic acid-HDI-isophthalic acid-neopentyl glycol-terephthalic acid copolymer, and triethylene glycol diglycidyl ether and 3.7-fold stretched to transverse direction and heat-set at 230° to give a tack-free A/B/A anchor-coated **film** with Ra 0.025  $\mu\text{m}$ , Ha 2.1%, and good resistance to hot



**water.**

IC ICM B32B027-30  
ICS B32B027-36

CC 38-3 (Plastics Fabrication and Uses)

ST tack free polyester laminate **film** vapor deposition; polyurethane polyester acrylic anchor **coating** laminate **film**; hot **water** resistance polyester **film** vapor deposition; metal vapor deposition polyester **film**

IT **Coating** materials  
(anchor; tack-free polyester **films** coated with acrylic anchor layers for vapor-phase deposition of metals)

IT **Water**-resistant materials  
**Water**-resistant materials  
(heat-resistant; tack-free polyester **films** coated with acrylic anchor layers for vapor-phase deposition of metals)

IT Polyurethanes, uses  
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
(polyester-, acrylic, **crosslinked**, anchor **coating** layer; tack-free polyester **films** coated with acrylic anchor layers for vapor-phase deposition of metals)

IT Polyesters, uses  
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
(substrate layer; tack-free polyester **films** coated with acrylic anchor layers for vapor-phase deposition of metals)

IT Laminated plastic **films**  
Vapor deposition process  
(tack-free polyester **films** coated with acrylic anchor layers for vapor-phase deposition of metals)

IT Metals, miscellaneous  
RL: MSC (Miscellaneous)  
(tack-free polyester **films** coated with acrylic anchor layers for vapor-phase deposition of metals)

IT Laminated plastics, uses  
Polyesters, uses  
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
(tack-free polyester **films** coated with acrylic anchor layers for vapor-phase deposition of metals)

IT Heat-resistant materials  
Heat-resistant materials  
(**water**-resistant; tack-free polyester **films** coated with acrylic anchor layers for vapor-phase deposition of metals)

IT 25038-59-9, Poly(ethylene terephthalate), uses  
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
(substrate layer; tack-free polyester **films** coated with acrylic anchor layers for vapor-phase deposition of metals)

IT **258841-77-9P**, Adipic acid-1,4-butanediol-dimethylolpropionic acid-ethyl acrylate-glycidyl methacrylate-HDI-isophthalic acid-methacrylic acid-methyl methacrylate-neopentyl glycol-terephthalic acid-triethylene glycol diglycidyl ether copolymer ammonium salt **258841-79-1P**  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(tack-free polyester **films** coated with acrylic anchor layers for vapor-phase deposition of metals)

IT **258841-77-9P**, Adipic acid-1,4-butanediol-dimethylolpropionic

acid-ethyl acrylate-glycidyl methacrylate-HDI-isophthalic acid-methacrylic acid-methyl methacrylate-neopentyl glycol-terephthalic acid-triethylene glycol diglycidyl ether copolymer ammonium salt **258841-79-1P**

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(tack-free polyester **films** coated with acrylic anchor layers for vapor-phase deposition of metals)

RN 258841-77-9 HCAPLUS

CN 1,3-Benzenedicarboxylic acid, polymer with 1,4-benzenedicarboxylic acid, 1,4-butanediol, 1,6-diisocyanatohexane, 2,2-dimethyl-1,3-propanediol, ethyl 2-propenoate, hexanedioic acid, 3-hydroxy-2-(hydroxymethyl)-2-methylpropanoic acid, methyl 2-methyl-2-propenoate, 2-methyl-2-propenoic acid, oxiranylmethyl 2-methyl-2-propenoate and 2,2'-(2,5,8,11-tetraoxadodecane-1,12-diyl)bis[oxirane], ammonium salt (9CI) (CA INDEX NAME)

CM 1

CRN 258841-76-8

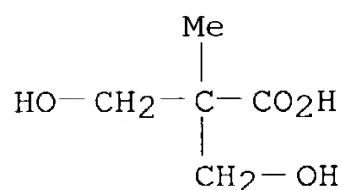
CMF (C12 H22 O6 . C8 H12 N2 O2 . C8 H6 O4 . C8 H6 O4 . C7 H10 O3 . C6 H10 O4 . C5 H12 O2 . C5 H10 O4 . C5 H8 O2 . C5 H8 O2 . C4 H10 O2 . C4 H6 O2)x

CCI PMS

CM 2

CRN 4767-03-7

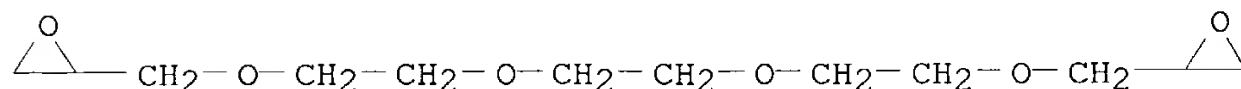
CMF C5 H10 O4



CM 3

CRN 1954-28-5

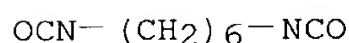
CMF C12 H22 O6



CM 4

CRN 822-06-0

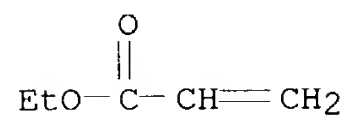
CMF C8 H12 N2 O2



CM 5

CRN 140-88-5

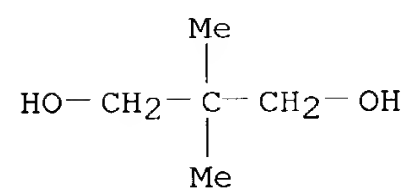
CMF C5 H8 O2



CM 6

CRN 126-30-7

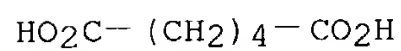
CMF C5 H12 O2



CM 7

CRN 124-04-9

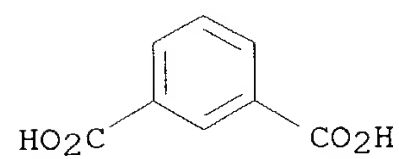
CMF C6 H10 O4



CM 8

CRN 121-91-5

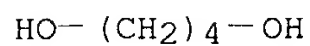
CMF C8 H6 O4



CM 9

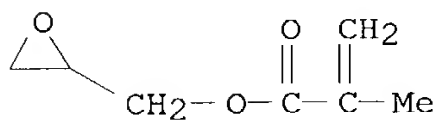
CRN 110-63-4

CMF C4 H10 O2



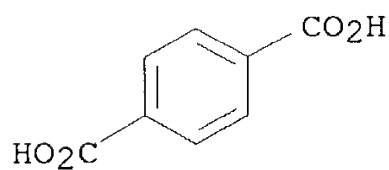
CM 10

CRN 106-91-2  
CMF C7 H10 O3



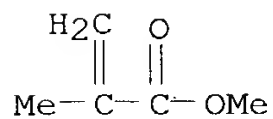
CM 11

CRN 100-21-0  
CMF C8 H6 O4



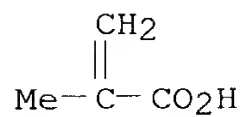
CM 12

CRN 80-62-6  
CMF C5 H8 O2



CM 13

CRN 79-41-4  
CMF C4 H6 O2



RN 258841-79-1 HCAPLUS

CN 1,3-Benzenedicarboxylic acid, polymer with 1,4-benzenedicarboxylic acid, 1,4-butanediol, 1,6-diisocyanatohexane, 2,2-dimethyl-1,3-propanediol, Epocros WS 500, ethyl 2-propenoate, hexanedioic acid, 3-hydroxy-2-(hydroxymethyl)-2-methylpropanoic acid, methyl 2-methyl-2-propenoate,

2-methyl-2-propenoic acid, Nichigo WR 961 and oxiranylmethyl  
2-methyl-2-propenoate, ammonium salt (9CI) (CA INDEX NAME)

CM 1

CRN 258841-78-0

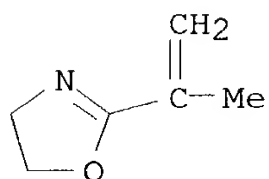
CMF (C8 H12 N2 O2 . C8 H6 O4 . C8 H6 O4 . C7 H12 O2 . C7 H10 O3 . C6 H10  
O4 . C6 H9 N O . C5 H12 O2 . C5 H10 O4 . C5 H8 O2 . C5 H8 O2 . C4 H10  
O2 . C4 H6 O2)x

CCI PMS

CM 2

CRN 10471-78-0

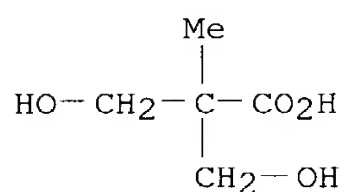
CMF C6 H9 N O



CM 3

CRN 4767-03-7

CMF C5 H10 O4



CM 4

CRN 822-06-0

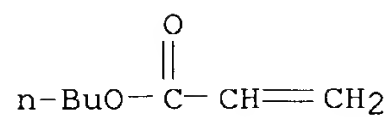
CMF C8 H12 N2 O2

OCN- (CH2)6- NCO

CM 5

CRN 141-32-2

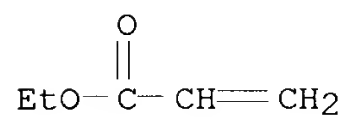
CMF C7 H12 O2



CM 6

CRN 140-88-5

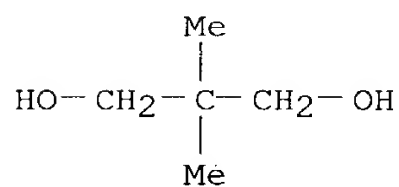
CMF C5 H8 O2



CM 7

CRN 126-30-7

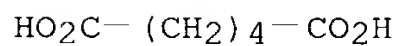
CMF C5 H12 O2



CM 8

CRN 124-04-9

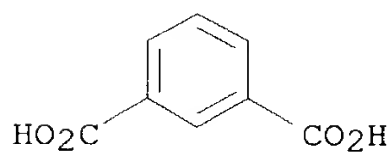
CMF C6 H10 O4



CM 9

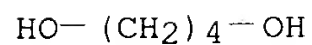
CRN 121-91-5

CMF C8 H6 O4



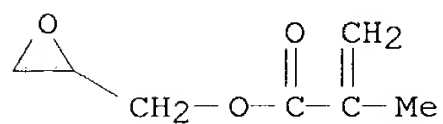
CM 10

CRN 110-63-4  
CMF C4 H10 O2



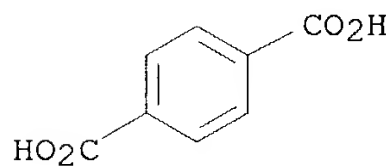
CM 11

CRN 106-91-2  
CMF C7 H10 O3



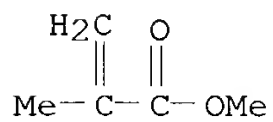
CM 12

CRN 100-21-0  
CMF C8 H6 O4



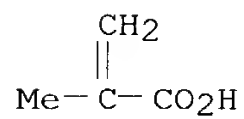
CM 13

CRN 80-62-6  
CMF C5 H8 O2



CM 14

CRN 79-41-4  
CMF C4 H6 O2



AN 1999:561808 HCAPLUS

DN 131:186335

TI **Coatings** based on **waterborne** base coat layers and powder clear coat layers

IN Bosch, Werner; Kinza, Wolfgang; Schmidt, Holger; Graewe, Rene; Kruckewitt, Sabine

PA Herberts Gesellschaft mit beschraenkter Haftung, Germany

SO Ger. Offen., 18 pp.

CODEN: GWXXBX

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 19837601	A1	19990826	DE 1998-19837601	19980819
PRAI	DE 1998-19837601		19980819		

AB Title **coatings** having glycidyl group-containing (meth) **acrylate** polymers and carboxylic acid hardeners as the powder clear coat layers and improved chip resistance are manufactured using **waterborne** base coat layers prepared from binders containing (A) 15-80% (A1) reaction product prepared by radical polymerization of 5-95%  $\geq 1$  olefinic unsatd. monomer in the presence of 5-95% carboxy-functional polycondensate optionally containing **epoxy** groups and(or) (A2) carboxy-functional (meth)**acrylate** emulsion copolymer; (B) 20-80% (B1) carboxy-functional polyurethane and(or) (B2) hybrid polymer prepared by radical polymerization of an olefinic unsatd. monomer in the presence of **aqueous** dispersion of a carboxy-functional **polyurethane**; (C) 0-40% [based on (A) and (B)]  $\geq 1$  binder different than (A) and (B). A typical base coat composition contained 19 parts 40% solids **aqueous** dispersion of a polymer prepared by radical polymerization of Me **methacrylate** 125, Bu **acrylate** 94, and glycidyl **methacrylate** 17 g in the presence of 705 g 32% solids dispersion prepared by reaction of glycerol-isophthalic acid (I)-maleic anhydride-phthalic anhydride copolymer Pr ester in the presence of an anhydride mixture formed by reaction of trimellitic anhydride with propylene glycol, reaction of the intermediate with **epoxidized** linseed oil, neutralization of the 2nd intermediate with Me<sub>2</sub>NH, and dispersion in **water**; 17 parts 30% solids dispersion prepared by polymerization of 1.8 g trimethylolpropane and 393 g IPDI in the presence of 1005 g adipic acid-hexanediol-I copolymer, polymerization of 35.3 g dimethylolpropionic acid in the presence of the resulting intermediate, and dispersion in **water**; 33.5 parts **water**; 8 parts thickener; 5 parts green pigment concentrate; 4 parts Al concentrate; 3 parts silicate dispersion; 9 parts ethylene glycol mono-Bu ether; 0.5 parts defoamer; and 1 part polypropylene glycol.

IC ICM B05D007-26  
ICS B05D007-16; C09D151-08; C09D175-04; C09D167-00; C09D163-00; C09D005-46

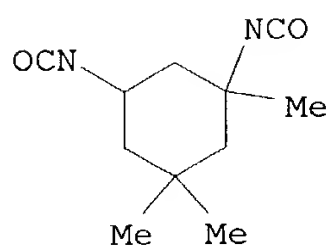
CC 42-10 (**Coatings**, Inks, and Related Products)

ST chip resistant multilayer **coating**; trimethylolpropane **polyester polyurethane waterborne** basecoat chip resistant **coating**; IPDI **polyester polyurethane waterborne** basecoat chip resistant **coating**; dimethylolpropionic **polyester polyurethane waterborne** basecoat chip resistant **coating**; hexanediol **polyester polyurethane**



- waterborne basecoat chip resistant **coating**; adipate  
**polyester polyurethane waterborne** basecoat  
chip resistant **coating**; **epoxidized** linseed oil  
**polyester waterborne** basecoat chip resistant  
**coating**; propylene glycol **polyester waterborne**  
basecoat chip resistant **coating**; trimellitate **polyester**  
**waterborne** basecoat chip resistant **coating**; glycerol  
**polyester waterborne** basecoat chip resistant  
**coating**; maleate **polyester waterborne** basecoat  
chip resistant **coating**; isophthalate **polyester**  
**waterborne** basecoat chip resistant **coating**; phthalate  
**polyester waterborne** basecoat chip resistant  
**coating**; **polyester polyurethane** carboxy  
functional **waterborne** basecoat chip resistant **coating**;  
**waterborne** basecoat carboxy **epoxy** functional polymer  
chip resistant **coating**; **polymethacrylate** glycidyl  
contg powder clear coat chip resistant **coating**; glycidyl contg  
**polyacrylate** powder clear coat chip resistant **coating**
- IT **Epoxy** resins, uses  
RL: TEM (Technical or engineered material use); USES (Uses) .  
(**acrylic**, clear coat binder; chip-resistant **coatings**  
based on **waterborne** basecoat layers and powder clear coat  
layers)
- IT **Coating** materials  
(chip-resistant; chip-resistant **coatings** based on  
**waterborne** basecoat layers and powder clear coat layers)
- IT Linseed oil  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM  
(Technical or engineered material use); PREP (Preparation); USES (Uses)  
(**epoxidized**, reaction products, with carboxy group-containing  
**polyesters** and glycidyl group-containing (meth)**acrylate**  
copolymers, dimethylamine salts, basecoat binders; chip-resistant  
**coatings** based on **waterborne** basecoat layers and  
powder clear coat layers)
- IT Polyurethanes, uses  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM  
(Technical or engineered material use); PREP (Preparation); USES (Uses)  
(**polyester-**, **acrylic**, basecoat binder;  
chip-resistant **coatings** based on **waterborne**  
basecoat layers and powder clear coat layers)
- IT Polyurethanes, uses  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM  
(Technical or engineered material use); PREP (Preparation); USES (Uses)  
(**polyester-**, basecoat binder; chip-resistant **coatings**  
based on **waterborne** basecoat layers and powder clear coat  
layers)
- IT **Coating** materials  
(powder; chip-resistant **coatings** based on **waterborne**  
basecoat layers and powder clear coat layers)
- IT **Polyesters**, uses  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM  
(Technical or engineered material use); PREP (Preparation); USES (Uses)  
(unsatd., **epoxy** group-containing, reaction products with  
**epoxy** group-containing (meth)**acrylate** polymers, basecoat  
binders; chip-resistant **coatings** based on **waterborne**  
basecoat layers and powder clear coat layers)
- IT **Coating** materials  
(**water**-thinned; chip-resistant **coatings** based on

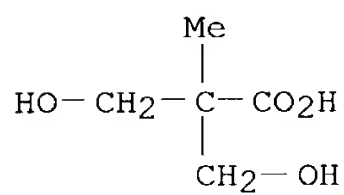
**waterborne** basecoat layers and powder clear coat layers)  
 IT 80-62-6DP, Methyl **methacrylate**, glycidyl group-containing polymers, reaction products with **epoxy** and carboxy group-containing **polyesters**, dimethylamine salts 106-91-2DP, Glycidyl **methacrylate**, reaction products with unsatd. monomers and **epoxy** and carboxy group-containing **polyesters**, dimethylamine salts 112-53-8DP, Dodecanol, reaction products with **polyester**-polyurethane-aminopropyltriethoxysilane-hydroxyethyl **methacrylate** adducts, polymers with alkyl (meth)**acrylates** 141-32-2DP, Butyl **acrylate**, glycidyl group-containing polymers, reaction products with **epoxy** and carboxy group-containing **polyesters**, dimethylamine salts 868-77-9DP, reaction products with **polyester**-polyurethane-aminopropyltriethoxysilane-dodecanol adducts, polymers with alkyl (meth)**acrylates** 919-30-2DP, 3-Aminopropyltriethoxysilane, reaction products with **polyester**-polyurethanes, triethylamine salts 1663-39-4DP, tert-Butyl **acrylate**, polymers with **polyester**-polyurethane-aminopropyltriethoxysilane-hydroxyethyl **methacrylate**-dodecanol adducts and alkyl (meth)**acrylates** **239794-13-9P** **239794-15-1DP**, reaction products with aminopropyltriethoxysilane **239794-16-2DP**, reaction products with dodecanol, aminopropyltriethoxysilane, and hydroxyethyl **methacrylate**, polymers with alkyl (meth)**acrylates** 240127-76-8DP, reaction products with **epoxidized** linseed oil and Me **methacrylate**-Bu **acrylate**-glycidyl **methacrylate** copolymers, dimethylamine salts  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (basecoat binder; chip-resistant **coatings** based on **waterborne** basecoat layers and powder clear coat layers)  
 IT 2530-33-8, 1,2-Dodecanedicarboxylic acid  
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)  
 (clear coat **crosslinker**; chip-resistant **coatings** based on **waterborne** basecoat layers and powder clear coat layers)  
 IT **239794-13-9P** **239794-15-1DP**, reaction products with aminopropyltriethoxysilane **239794-16-2DP**, reaction products with dodecanol, aminopropyltriethoxysilane, and hydroxyethyl **methacrylate**, polymers with alkyl (meth)**acrylates**  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (basecoat binder; chip-resistant **coatings** based on **waterborne** basecoat layers and powder clear coat layers)  
 RN 239794-13-9 HCAPLUS  
 CN 1,3-Benzenedicarboxylic acid, polymer with 1,5-diisocyanato-1,3,3-trimethylcyclohexane, 2-ethyl-2-(hydroxymethyl)-1,3-propanediol, hexanedioic acid, 1,6-hexanediol and 3-hydroxy-2-(hydroxymethyl)-2-methylpropanoic acid (9CI) (CA INDEX NAME)  
 CM 1  
 CRN 46466-20-0  
 CMF C11 H16 N2 O2



CM 2

CRN 4767-03-7

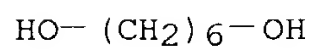
CMF C5 H10 O4



CM 3

CRN 629-11-8

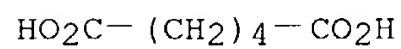
CMF C6 H14 O2



CM 4

CRN 124-04-9

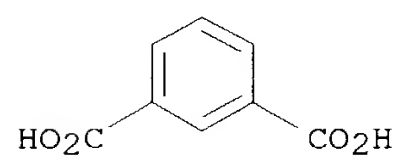
CMF C6 H10 O4



CM 5

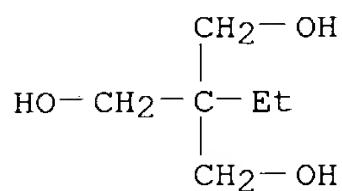
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CMF C8 H6 O4



CM 6

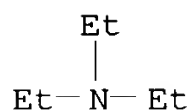
CRN 77-99-6  
CMF C6 H14 O3



RN 239794-15-1 HCAPLUS  
CN 1,3-Benzenedicarboxylic acid, polymer with 1,5-diisocyanato-1,3,3-trimethylcyclohexane, hexanedioic acid, 1,6-hexanediol, 3-hydroxy-2-(hydroxymethyl)-2-methylpropanoic acid, 2,2'-iminobis[ethanol] and 3-(triethoxysilyl)-1-propanamine, compd. with N,N-diethylethanamine (9CI) (CA INDEX NAME)

CM 1

CRN 121-44-8  
CMF C6 H15 N

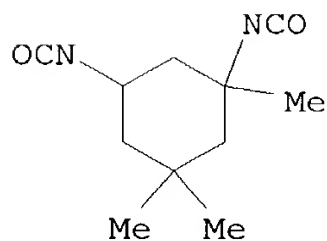


CM 2

CRN 239794-14-0  
CMF (C11 H16 N2 O2 . C9 H23 N O3 Si . C8 H6 O4 . C6 H14 O2 . C6 H10 O4 . C5 H10 O4 . C4 H11 N O2)x  
CCI PMS

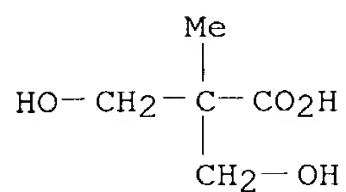
CM 3

CRN 46466-20-0  
CMF C11 H16 N2 O2



CM 4

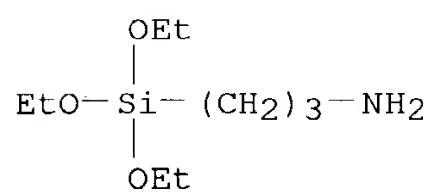
CRN 4767-03-7  
CMF C5 H10 O4



CM 5

CRN 919-30-2

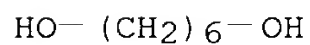
CMF C9 H23 N O3 Si



CM 6

CRN 629-11-8

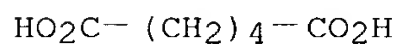
CMF C6 H14 O2



CM 7

CRN 124-04-9

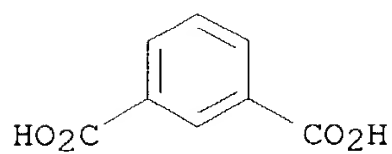
CMF C6 H10 O4



CM 8

CRN 121-91-5

CMF C8 H6 O4



CM 9

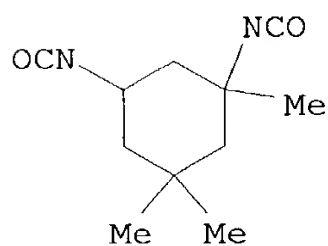
CRN 111-42-2  
CMF C4 H11 N O2



RN 239794-16-2 HCAPLUS  
CN 1,3-Benzenedicarboxylic acid, polymer with 1,5-diisocyanato-1,3,3-trimethylcyclohexane, 2,2-dimethyl-1,3-propanediol, hexanedioic acid, 3-hydroxy-2-(hydroxymethyl)-2-methylpropanoic acid and 3-(triethoxysilyl)-1-propanamine (9CI) (CA INDEX NAME)

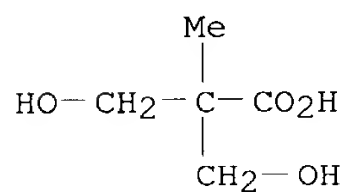
CM 1

CRN 46466-20-0  
CMF C11 H16 N2 O2



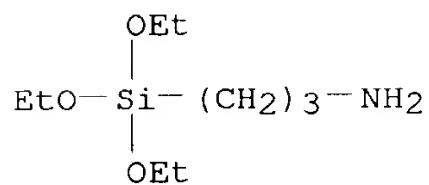
CM 2

CRN 4767-03-7  
CMF C5 H10 O4



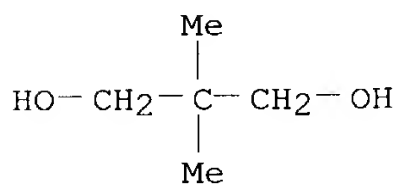
CM 3

CRN 919-30-2  
CMF C9 H23 N O3 Si



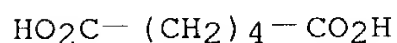
CM 4

CRN 126-30-7  
CMF C5 H12 O2



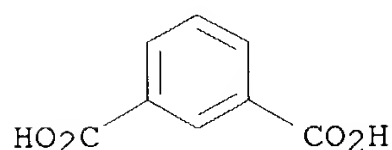
CM 5

CRN 124-04-9  
CMF C6 H10 O4



CM 6

CRN 121-91-5  
CMF C8 H6 O4



RE.CNT 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L56 ANSWER 17 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN  
AN 1998:712740 HCAPLUS  
DN 130:14990  
TI Compositions for hydrophilic **coatings** and heat exchanger members  
coated with the same  
IN Osaku, Tatsuya; Mukai, Yoikazu; Ota, Yosuke; Kamitani, Kenichi  
PA Kobe Steel, Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 8 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
FAN.CNT 1

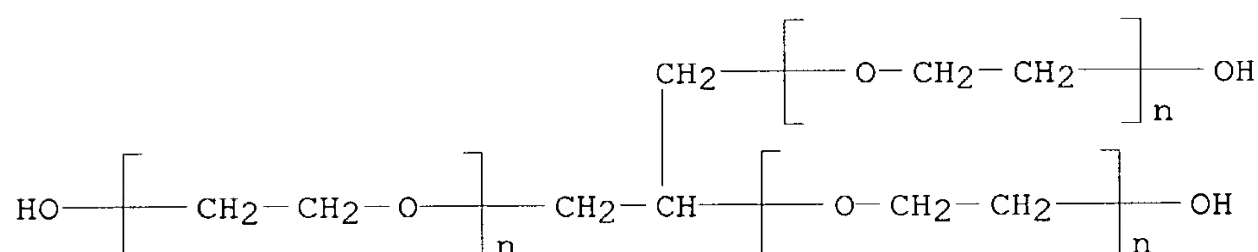
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 10292128	A2	19981104	JP 1997-99363	19970416
PRAI	JP 1997-99363		19970416		
AB	The compns. comprise <b>aqueous</b> solns. containing blocked isocyanate-modified polyhydric alc. compds., and optionally <b>water</b> -soluble polymers and <b>water</b> -soluble <b>crosslinking</b> agents. The blocking agents for isocyanates may be alcs., phenols, ε-caprolactam, oximes, active methylene compds., and/or				

bisulfites. The polyhydric alcs. may be polyether-polyols, **polyester**-polyols, **epoxy**-modified polyols, **acrylic**-modified polyols, and/or polycarbonate-polyols. The heat exchanger members have crack-inhibiting **coating** layers obtained from the compns. The members may be Al (alloy). Thus, 2% **aqueous** solution of MEK-blocked polyethylene glycol glycerol ether-HMDI copolymer was applied on a degreased and chromated Al sheet and baked at 200° to give a **coating film** showing **water** contact angle <20°, no odor, and excellent crack resistance.

- IC ICM C09D005-00
- ICS B05D005-00; B05D007-14; C09D175-00; F28F013-18; F28F019-02
- CC 42-10 (**Coatings**, Inks, and Related Products)  
Section cross-reference(s): 56
- ST MEK blocked polyoxyalkylene polyurethane hydrophilic **coating**;  
heat exchanger fin **coating** hydrophilic polyurethane; crack  
resistant polyoxyethylene HMDI copolymer blocked
- IT **Coating** materials  
(hydrophilic **coatings**; isocyanate-blocked **water**  
-soluble polymer compns. for hydrophilic **coatings** on heat  
exchanger members)
- IT Heat exchanger fins  
(isocyanate-blocked **water**-soluble polymer compns. for  
hydrophilic **coatings** on heat exchanger members)
- IT **Polyurethanes**, uses  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP  
(Properties); TEM (Technical or engineered material use); PREP  
(Preparation); USES (Uses)  
(polyoxyalkylene-; isocyanate-blocked **water**-soluble polymer  
compns. for hydrophilic **coatings** on heat exchanger members)
- IT 78-93-3, Methyl ethyl ketone, uses  
RL: MOA (Modifier or additive use); USES (Uses)  
(blocking agents for polyisocyanates; isocyanate-blocked **water**  
-soluble polymer compns. for hydrophilic **coatings** on heat  
exchanger members)
- IT 107-22-2, Glyoxal  
RL: MOA (Modifier or additive use); USES (Uses)  
(**crosslinking** agents; isocyanate-blocked **water**-soluble  
polymer compns. for hydrophilic **coatings** on heat exchanger  
members)
- IT 22829-17-0, Ammonium zirconium carbonate  
RL: CAT (Catalyst use); USES (Uses)  
(**crosslinking** catalysts; isocyanate-blocked **water**  
-soluble polymer compns. for hydrophilic **coatings** on heat  
exchanger members)
- IT **110726-54-0P**, Hexamethylene diisocyanate-polyethylene glycol  
glycerol ether copolymer  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP  
(Properties); TEM (Technical or engineered material use); PREP  
(Preparation); USES (Uses)  
(isocyanate-blocked **water**-soluble polymer compns. for  
hydrophilic **coatings** on heat exchanger members)
- IT 9002-89-5, Poly(vinyl alcohol) 9003-01-4, Poly(**acrylic** acid)  
9003-03-6, Poly(**acrylic** acid) ammonium salt 9003-04-7, Poly(  
**acrylic** acid) sodium salt 9003-05-8, **Polyacrylamide**  
9004-32-4, Carboxymethyl cellulose sodium salt 9086-60-6, Carboxymethyl  
cellulose ammonium salt 25608-12-2, Poly(**acrylic** acid)  
potassium salt 54848-04-3, Carboxymethyl cellulose potassium salt  
RL: MOA (Modifier or additive use); PRP (Properties); TEM (Technical or



engineered material use); USES (Uses)  
 (isocyanate-blocked **water**-soluble polymer compns. for  
 hydrophilic **coatings** on heat exchanger members)  
 IT **110726-54-0P**, Hexamethylene diisocyanate-polyethylene glycol  
 glycerol ether copolymer  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP  
 (Properties); TEM (Technical or engineered material use); PREP  
 (Preparation); USES (Uses)  
 (isocyanate-blocked **water**-soluble polymer compns. for  
 hydrophilic **coatings** on heat exchanger members)  
 RN 110726-54-0 HCAPLUS  
 CN Poly(oxy-1,2-ethanediyl),  $\alpha, \alpha', \alpha''$ -1,2,3-  
 propanetriyltris[ $\omega$ -hydroxy-, polymer with 1,6-diisocyanatohexane  
 (9CI) (CA INDEX NAME)  
 CM 1  
 CRN 31694-55-0  
 CMF (C2 H4 O)<sub>n</sub> (C2 H4 O)<sub>n</sub> (C2 H4 O)<sub>n</sub> C3 H8 O3  
 CCI PMS



CM 2  
 CRN 822-06-0  
 CMF C8 H12 N2 O2

OCN-(CH<sub>2</sub>)<sub>6</sub>-NCO

L56 ANSWER 18 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1998:71183 HCAPLUS  
 DN 128:129263  
 TI Anticorrosive cationic electrodeposition **coating** compositions  
 with excellent curability  
 IN Iino, Yutaka; Sugisaki, Katsuhisa; Kamikado, Koji  
 PA Kansai Paint Company, Limited, Japan; Iino, Yutaka; Sugisaki, Katsuhisa;  
 Kamikado, Koji  
 SO PCT Int. Appl., 32 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9802494	A1	19980122	WO 1997-JP2379	19970709

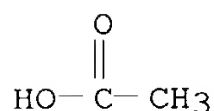
KATHLEEN FULLER EIC 1700 REMSEN 4B28 571/272-2505

W: CA, JP, KR, US  
 RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE  
 CA 2231574 AA 19980122 CA 1997-2231574 19970709  
 EP 866104 A1 19980923 EP 1997-930736 19970709  
 EP 866104 B1 20021023  
 R: DE, FR, GB  
 US 6031028 A 20000229 US 1998-29607 19980310  
 PRAI JP 1996-183130 A 19960712  
 WO 1997-JP2379 W 19970709  
 AB The title compns. comprise (A) a resin prepared by introducing cationic groups into an epoxy resin prepared by reacting an acrylic polymer having epoxy or carboxyl groups, a bisphenol compound, and a bisphenol diglycidyl ether epoxy resin, (B) an acrylic resin having hydroxyl and amino groups, and (C) an isocyanate **crosslinking** agent, and are cured by urethanization **crosslinking**. A 63%-solids polymer solution was prepared from styrene 510, 2-hydroxyethyl methacrylate 340, Bu acrylate 114, FM-3 113, and acrylic acid 57 parts in butyl Cellosolve. Bisphenol A 272, bisphenol A diglycidyl ether 815, and Et4NBr 0.25 part were heated at 150° to epoxy equivalent 570, cooled to 120°, treated with 440 parts MDI partially blocked by diethylene glycol monoethyl ether to isocyanate content 5.76% at 110° for 2 h then with 650 parts of the above 63%-solids polymer solution and 160 parts diethanolamine at 110° with complete reaction of epoxy group, and thinned with butyl Cellosolve to give a 72%-solids solution of acrylic polymer containing hydroxy and amino groups. The above acrylic polymer 88, 400:72:136:56:56:80 styrene-Me methacrylate-2-hydroxyethyl acrylate-2-hydroxyethyl methacrylate-FM 3-dimethylaminoethyl methacrylate copolymer 12, diethylene glycol monoethyl ether-blocked MDI 7, and dioctyltin oxide 3 parts were neutralized with AcOH and thinned in **water** to give a 20%-solids cationic electrodeposition **coating** composition used on automobile body.  
 IC ICM C09D005-44  
 CC 42-10 (**Coatings**, Inks, and Related Products)  
 ST epoxy acrylic polyester cationic electrodeposition; automobile body cationic electrodeposition  
 IT Epoxy resins, uses  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (acrylic-polyester-; anticorrosive cationic electrodeposition **coating** compns. with excellent curability)  
 IT Electrodeposition  
 (anticorrosive cationic electrodeposition **coating** compns. with excellent curability)  
 IT **201873-33-8P 201873-34-9P**  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (anticorrosive cationic electrodeposition **coating** compns. with excellent curability)  
 IT **201873-33-8P 201873-34-9P**  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (anticorrosive cationic electrodeposition **coating** compns. with excellent curability)  
 RN 201873-33-8 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl-, 2-(dimethylamino)ethyl ester, polymer with butyl 2-propenoate, ethenylbenzene, 2-hydroxyethyl 2-methyl-2-propenoate, 2-hydroxyethyl 2-propenoate, 2,2'-iminobis[ethanol], 1,1'-methylenebis[4-

isocyanatobenzene], 4,4'-(1-methylethylidene)bis[phenol],  
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis[oxirane],  
methyl 2-methyl-2-propenoate,  $\alpha$ -[2-[(2-methyl-1-oxo-2-  
propenyl)oxy]ethyl]- $\omega$ -hydroxypoly[oxy(1-oxo-1,6-hexanediyl)] and  
2-propenoic acid, acetate (ester) (9CI) (CA INDEX NAME)

CM 1

CRN 64-19-7  
CMF C2 H4 O2

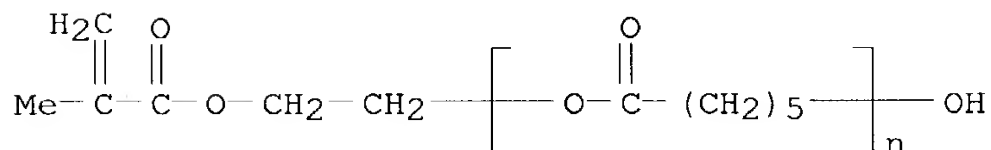


CM 2

CRN 201815-33-0  
CMF (C21 H24 O4 . C15 H16 O2 . C15 H10 N2 O2 . C8 H15 N O2 . C8 H8 . C7  
H12 O2 . C6 H10 O3 . (C6 H10 O2)<sub>n</sub> C6 H10 O3 . C5 H8 O3 . C5 H8 O2 .  
C4 H11 N O2 . C3 H4 O2)<sub>x</sub>  
CCI PMS

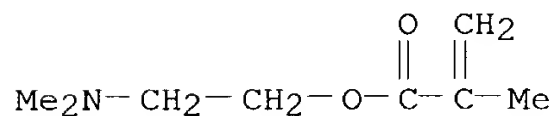
CM 3

CRN 81984-60-3  
CMF (C6 H10 O2)<sub>n</sub> C6 H10 O3  
CCI PMS



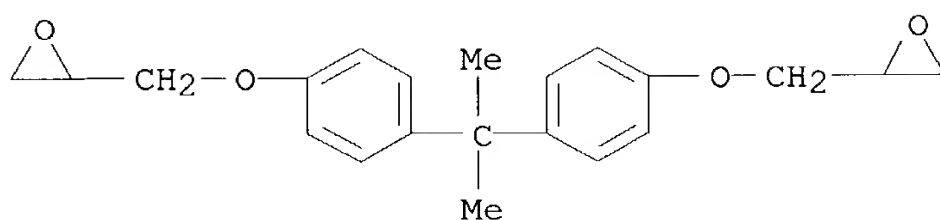
CM 4

CRN 2867-47-2  
CMF C8 H15 N O2



CM 5

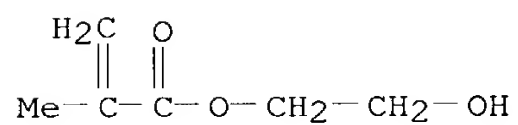
CRN 1675-54-3  
CMF C21 H24 O4



CM 6

CRN 868-77-9

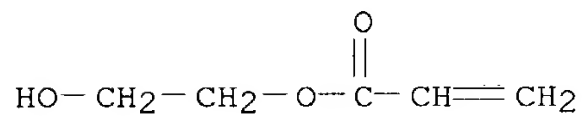
CMF C6 H10 O3



CM 7

CRN 818-61-1

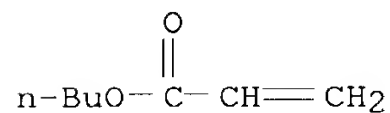
CMF C5 H8 O3



CM 8

CRN 141-32-2

CMF C7 H12 O2



CM 9

CRN 111-42-2

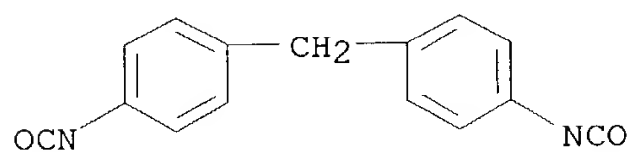
CMF C4 H11 N O2



CM 10

CRN 101-68-8

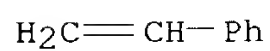
CMF C15 H10 N2 O2



CM 11

CRN 100-42-5

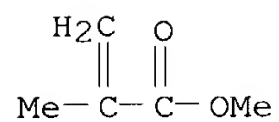
CMF C8 H8



CM 12

CRN 80-62-6

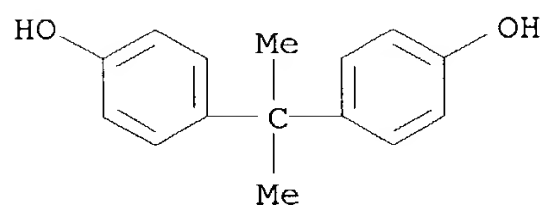
CMF C5 H8 O2



CM 13

CRN 80-05-7

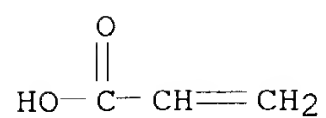
CMF C15 H16 O2



CM 14

CRN 79-10-7

CMF C3 H4 O2



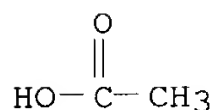
RN 201873-34-9 HCAPLUS

KATHLEEN FULLER EIC 1700 REMSEN 4B28 571/272-2505

CN 2-Propenoic acid, 2-methyl-, 2-(dimethylamino)ethyl ester, polymer with butyl 2-propenoate, ethenylbenzene, 2-hydroxyethyl 2-methyl-2-propenoate, 2,2'-iminobis[ethanol], 1,1'-methylenebis[4-isocyanatobenzene], 4,4'-(1-methylethylidene)bis[phenol], 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis[oxirane],  $\alpha$ -[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl]- $\omega$ -hydroxypoly[oxy(1-oxo-1,6-hexanediyl)] and 2-propenoic acid, acetate (ester) (9CI) (CA INDEX NAME)

CM 1

CRN 64-19-7  
CMF C2 H4 O2

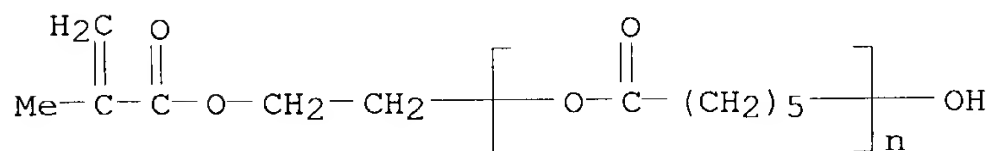


CM 2

CRN 201815-36-3  
CMF (C21 H24 O4 . C15 H16 O2 . C15 H10 N2 O2 . C8 H15 N O2 . C8 H8 . C7 H12 O2 . C6 H10 O3 . (C6 H10 O2)<sub>n</sub> C6 H10 O3 . C4 H11 N O2 . C3 H4 O2) x  
CCI PMS

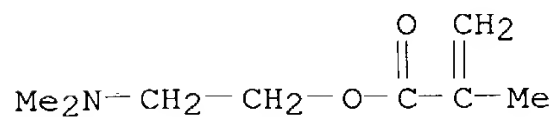
CM 3

CRN 81984-60-3  
CMF (C6 H10 O2)<sub>n</sub> C6 H10 O3  
CCI PMS



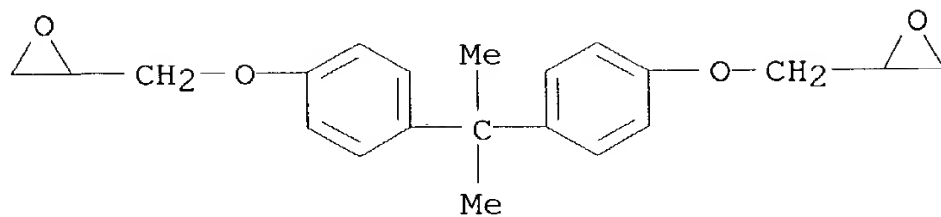
CM 4

CRN 2867-47-2  
CMF C8 H15 N O2



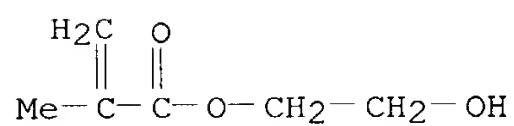
CM 5

CRN 1675-54-3  
CMF C21 H24 O4



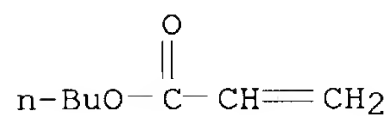
CM 6

CRN 868-77-9  
CMF C6 H10 O3



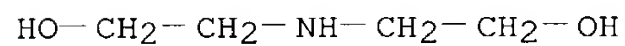
CM 7

CRN 141-32-2  
CMF C7 H12 O2



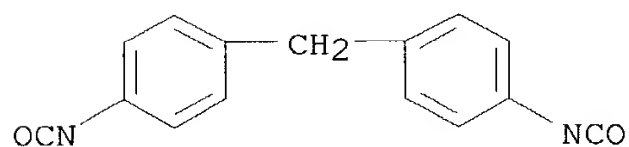
CM 8

CRN 111-42-2  
CMF C4 H11 N O2



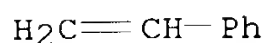
CM 9

CRN 101-68-8  
CMF C15 H10 N2 O2



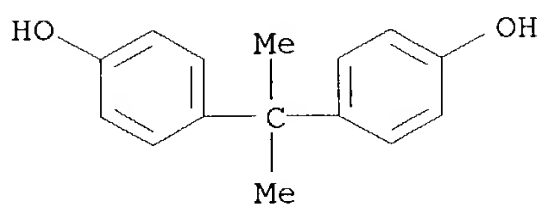
CM 10

CRN 100-42-5  
CMF C8 H8



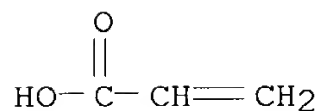
CM 11

CRN 80-05-7  
CMF C15 H16 O2



CM 12

CRN 79-10-7  
CMF C3 H4 O2



RE.CNT 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L56 ANSWER 19 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN  
AN 1997:781291 HCAPLUS  
DN 128:23603  
TI Latently-**crosslinkable polyurethane aqueous**  
dispersions  
IN Licht, Ulrike; Kokel, Nicolas; Haeberle, Karl; Angel, Maximilian; Weyland,  
Peter; Scherr, Guenter  
PA BASF A.-G., Germany  
SO Ger. Offen., 14 pp.  
CODEN: GWXXBX  
DT Patent  
LA German  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 19619636	A1	19971120	DE 1996-19619636	19960515
	EP 807648	A2	19971119	EP 1997-107492	19970507
	EP 807648	A3	19980422		
	EP 807648	B1	19991208		

R: BE, CH, DE, ES, FR, GB, IT, LI, NL



ES 2142642	T3	20000416	ES 1997-107492	19970507
US 5905113	A	19990518	US 1997-855948	19970514
JP 10060263	A2	19980303	JP 1997-125130	19970515

PRAI DE 1996-19619636 A 19960515

AB The title dispersions, with good storage stability and giving heat-resistant bonding, have disperse phases containing **H2O**-dispersible **polyurethanes** bearing C:O groups activated by carbonyl groups and amines bearing  $\geq 2$  NH groups and having **H2O** solubility  $>1$  g/L at  $25^\circ$  and number-average mol. weight 200-106. A 40% **aqueous** dispersion of a **polyurethane** prepared from 565.5 g poly(butylene adipate) (OH number 45), 29.6 g TDI, 28.6 g HMDI, 40.95 g **acrylic** acid-ethylenediamine adduct Na salt, and 160.0 g 1:2 bisphenol A diglycidyl ether-**acrylic** acid adduct was mixed with 25% **aqueous** polyethylenimine (double bond-amino group equivalent ratio 1:1) to give a dispersion (viscosity 34.1 mPa-s, pH 9.3) which formed an insol. **film** when dried at  $40^\circ$ .

IC ICM C08L075-12  
ICS C08L075-14; C09J175-12; C08J003-24; C08J003-03; C09D175-14; C08G018-40; C08G018-65; C08G018-67; C08G018-38; C08G018-32; C08G073-04

ICA C14C011-00; B32B007-12; C08J005-12; C08G018-42; C08G018-48; C08G018-44; C08G018-62; B27N001-00

CC 37-3 (Plastics Manufacture and Processing)  
Section cross-reference(s): 42

ST **crosslinking** latent **polyurethane** aq dispersion; **polyester** polyurethane **crosslinking** latent; polyethylenimine **crosslinker** polyurethane dispersion; **coating** polyurethane dispersion curable; **epoxy acrylate** polyurethane curable; **acrylic** acid adduct polyurethane curable; ethylenediamine adduct polyurethane curable

IT **Crosslinking**  
(latent; latently-**crosslinkable** **polyurethane aqueous** dispersions)

IT Leather  
(latently-**crosslinkable** **polyurethane aqueous** dispersions for **coating** of leather)

IT **Polyurethanes**, preparation  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(**polyester**-; latently-**crosslinkable** **polyurethane aqueous** dispersions)

IT **Polyurethanes**, preparation  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polyoxyalkylene-; latently-**crosslinkable** **polyurethane aqueous** dispersions)

IT Adhesives  
(**water**-thinned; latently-**crosslinkable** **polyurethane aqueous** dispersions)

IT **Coating** materials  
(**water**-thinned; latently-**crosslinkable** **polyurethane aqueous** dispersions for **coating** of leather)

IT 9002-98-6, Polyaziridine  
RL: MOA (Modifier or additive use); USES (Uses)  
(**crosslinking** agent; latently-**crosslinkable** **polyurethane aqueous** dispersions)

IT 79-10-7DP, **Acrylic** acid, reaction products with ethylenediamine

and **polyurethanes** 107-15-3DP, Ethylenediamine, reaction products with **acrylic** acid and **polyurethanes** 4687-94-9DP, reaction products with polyurethanes, **acrylic** acid-ethylenediamine adducts and polyamines 52408-42-1DP, reaction products with polyurethanes, **acrylic** acid-ethylenediamine adducts and polyamines **72725-16-7DP**, reaction products with **epoxy acrylates**, **acrylic** acid-ethylenediamine adducts and polyamines **153354-08-6DP**, reaction products with **epoxy acrylates**, **acrylic** acid-ethylenediamine adducts and polyamines **164462-23-1DP**, reaction products with **epoxy acrylates**, **acrylic** acid-ethylenediamine adducts and polyamines **199383-55-6DP**, reaction products with **epoxy acrylates**, **acrylic** acid-ethylenediamine adducts and polyamines **199383-56-7DP**, reaction products with polyamines

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(latently-**crosslinkable polyurethane aqueous** dispersions)

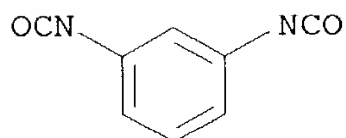
IT **72725-16-7DP**, reaction products with **epoxy acrylates**, **acrylic** acid-ethylenediamine adducts and polyamines **153354-08-6DP**, reaction products with **epoxy acrylates**, **acrylic** acid-ethylenediamine adducts and polyamines **164462-23-1DP**, reaction products with **epoxy acrylates**, **acrylic** acid-ethylenediamine adducts and polyamines **199383-55-6DP**, reaction products with **epoxy acrylates**, **acrylic** acid-ethylenediamine adducts and polyamines **199383-56-7DP**, reaction products with polyamines  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(latently-**crosslinkable polyurethane aqueous** dispersions)

RN 72725-16-7 HCAPLUS

CN Hexanedioic acid, polymer with 1,6-diisocyanatohexane, 1,3-diisocyanatomethylbenzene and 2,2'-oxybis[ethanol] (9CI) (CA INDEX NAME)

CM 1

CRN 26471-62-5  
CMF C9 H6 N2 O2  
CCI IDS



D1-Me

CM 2

CRN 822-06-0

CMF C8 H12 N2 O2

OCN—(CH<sub>2</sub>)<sub>6</sub>—NCO

CM 3

CRN 124-04-9

CMF C6 H10 O4

HO<sub>2</sub>C—(CH<sub>2</sub>)<sub>4</sub>—CO<sub>2</sub>H

CM 4

CRN 111-46-6

CMF C4 H10 O3

HO—CH<sub>2</sub>—CH<sub>2</sub>—O—CH<sub>2</sub>—CH<sub>2</sub>—OH

RN 153354-08-6 HCAPLUS

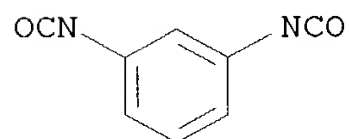
CN Hexanedioic acid, polymer with 1,4-butanediol, 1,6-diisocyanatohexane and 1,3-diisocyanatomethylbenzene (9CI) (CA INDEX NAME)

CM 1

CRN 26471-62-5

CMF C9 H6 N2 O2

CCI IDS



D1—Me

CM 2

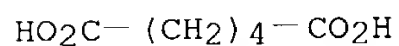
CRN 822-06-0

CMF C8 H12 N2 O2

OCN—(CH<sub>2</sub>)<sub>6</sub>—NCO

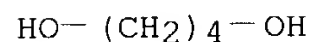
CM 3

CRN 124-04-9  
CMF C6 H10 O4



CM 4

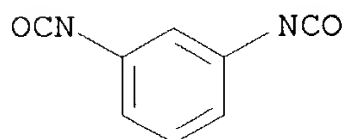
CRN 110-63-4  
CMF C4 H10 O2



RN 164462-23-1 HCAPLUS  
CN Propanoic acid, 3-hydroxy-2-(hydroxymethyl)-2-methyl-, polymer with 1,3-diisocyanatomethylbenzene, 2,2-dimethyl-1,3-propanediol and  $\alpha$ -hydro- $\omega$ -hydroxypoly[oxy(methyl-1,2-ethanediyl)] (9CI) (CA INDEX NAME)

CM 1

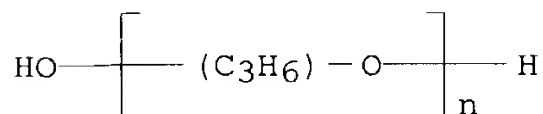
CRN 26471-62-5  
CMF C9 H6 N2 O2  
CCI IDS



Dl-Me

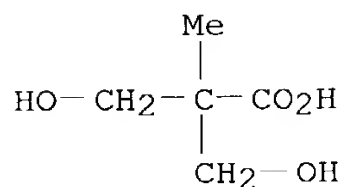
CM 2

CRN 25322-69-4  
CMF (C3 H6 O)<sub>n</sub> H2 O  
CCI IDS, PMS



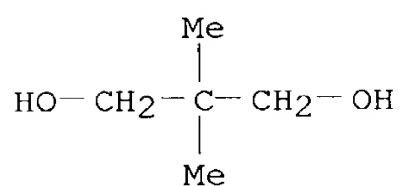
CM 3

CRN 4767-03-7  
CMF C5 H10 O4



CM 4

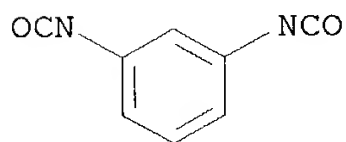
CRN 126-30-7  
CMF C5 H12 O2



RN 199383-55-6 HCAPLUS  
CN Hexanedioic acid, polymer with 1,3-diisocyanatomethylbenzene,  
3-hydroxy-2-(hydroxymethyl)-2-methylpropanoic acid and  
2,2'-oxybis[ethanol] (9CI) (CA INDEX NAME)

CM 1

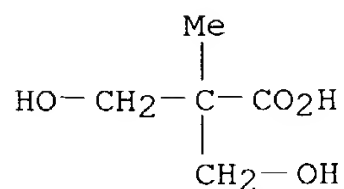
CRN 26471-62-5  
CMF C9 H6 N2 O2  
CCI IDS



D1-Me

CM 2

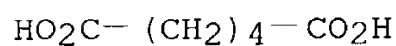
CRN 4767-03-7  
CMF C5 H10 O4



CM 3

CRN 124-04-9

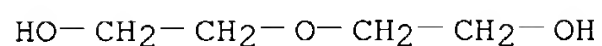
CMF C6 H10 O4



CM 4

CRN 111-46-6

CMF C4 H10 O3



RN 199383-56-7 HCAPLUS

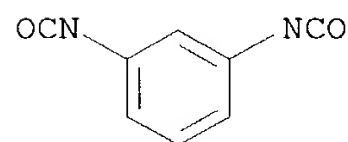
CN Hexanedioic acid, polymer with 1,3-diisocyanatomethylbenzene, 2,2-dimethyl-1,3-propanediol, 2-ethyl-2-(hydroxymethyl)-1,3-propanediol, 1,6-hexanediol, 2-hydroxyethyl 2-propenoate and 3-hydroxy-2-(hydroxymethyl)-2-methylpropanoic acid (9CI) (CA INDEX NAME)

CM 1

CRN 26471-62-5

CMF C9 H6 N2 O2

CCI IDS

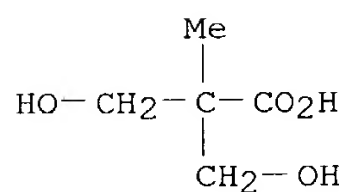


D1-Me

CM 2

CRN 4767-03-7

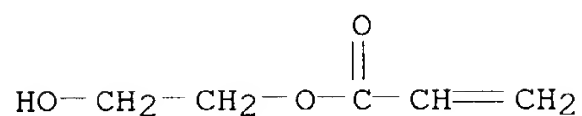
CMF C5 H10 O4



CM 3

CRN 818-61-1

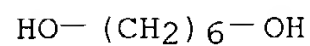
CMF C5 H8 O3



CM 4

CRN 629-11-8

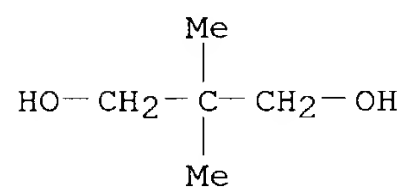
CMF C6 H14 O2



CM 5

CRN 126-30-7

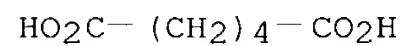
CMF C5 H12 O2



CM 6

CRN 124-04-9

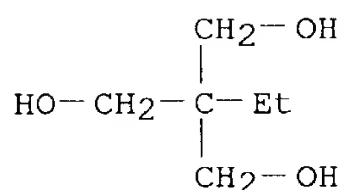
CMF C6 H10 O4



CM 7

CRN 77-99-6

CMF C6 H14 O3



L56 ANSWER 20 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1997:69422 HCAPLUS

DN 126:90774

TI Active energy beam-curable **aqueous** dispersions for rapid-curing **coatings** and inks with excellent adhesion and chemical resistance

IN Tanaka, Shigehiro; Takase, Masanori; Hosaka, Kazuko

PA Dainippon Ink & Chemicals, Japan

SO Jpn. Kokai Tokkyo Koho, 16 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 08259888	A2	19961008	JP 1995-65903	19950324
PRAI	JP 1995-65903		19950324		

AB The title dispersions contain active energy beam-curable microgel particles containing active energy beam-sensitive double bonds and salt groups and **crosslinks** containing urethane or urea bonds. MPD/IPA500 polyester polyol, dimethylolpropionic acid, trimethylolpropane, IPDI, and dicyclohexylmethane-4,4'-diisocyanate were polymerized, reacted with Viscoat 214HP (hydroxy acrylic monomer), and treated with triethylamine in **water** then with A-1130 and Surfynyl AK02 to give an **aqueous** dispersion, which was then used with Irgacure to obtain a UV-cured **coating** with pencil hardness 2H, excellent MEK resistance and adhesion on aluminum.

IC ICM C09D175-16

ICS C08F299-06; C08G018-08; C08G018-40; C08G018-67; C09D005-00; C09D011-10

CC 42-10 (**Coatings**, Inks, and Related Products)

ST photocurable polyester polyurethane acrylic **coating**

IT **Coating** materials

(photocurable; active energy beam-curable **aqueous** dispersions for rapid-curing **coatings** and inks with excellent adhesion and chemical resistance)

IT Polyurethanes, uses

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(polyester-, acrylic; active energy beam-curable **aqueous** dispersions for rapid-curing **coatings** and inks with excellent adhesion and chemical resistance)

IT Acrylic polymers, uses

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(polyester-polyurethane-; active energy beam-curable **aqueous** dispersions for rapid-curing **coatings** and inks with excellent adhesion and chemical resistance)

IT 184974-69-4P 184974-77-4P 185077-11-6P



185077-13-8P 185077-15-0P 185077-17-2P  
185124-49-6P 185124-50-9P 185124-52-1P  
185528-33-0P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(active energy beam-curable **aqueous** dispersions for rapid-curing **coatings** and inks with excellent adhesion and chemical resistance)

IT 184974-69-4P 184974-77-4P 185077-11-6P  
185077-13-8P 185077-15-0P 185077-17-2P  
185124-49-6P 185124-50-9P 185124-52-1P  
185528-33-0P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(active energy beam-curable **aqueous** dispersions for rapid-curing **coatings** and inks with excellent adhesion and chemical resistance)

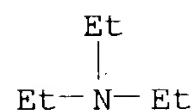
RN 184974-69-4 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, monoester with 1,2,3-propanetriol, polymer with 2,5(or 2,6)-bis(isocyanatomethyl)bicyclo[2.2.1]heptane, 3-hydroxy-2-(hydroxymethyl)-2-methylpropanoic acid, 2-hydroxypropyl 2-propenoate and Placel L 205AL, compd. with N,N-diethylethanamine (9CI) (CA INDEX NAME)

CM 1

CRN 121-44-8

CMF C6 H15 N



CM 2

CRN 184974-68-3

CMF (C11 H14 N2 O2 . C7 H12 O4 . C6 H10 O3 . C5 H10 O4 . Unspecified)x

CCI PMS

CM 3

CRN 121631-37-6

CMF Unspecified

CCI PMS, MAN

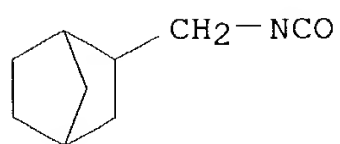
\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 4

CRN 74091-64-8

CMF C11 H14 N2 O2

CCI IDS

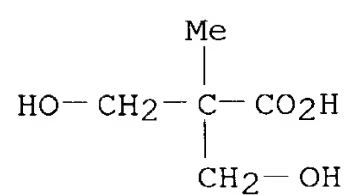


D1-CH<sub>2</sub>-NCO

CM 5

CRN 4767-03-7

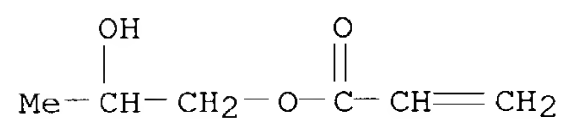
CMF C5 H10 O4



CM 6

CRN 999-61-1

CMF C6 H10 O3



CM 7

CRN 50853-28-6

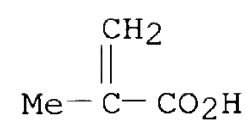
CMF C7 H12 O4

CCI IDS

CM 8

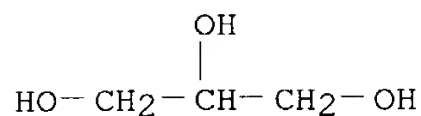
CRN 79-41-4

CMF C4 H6 O2



CM 9

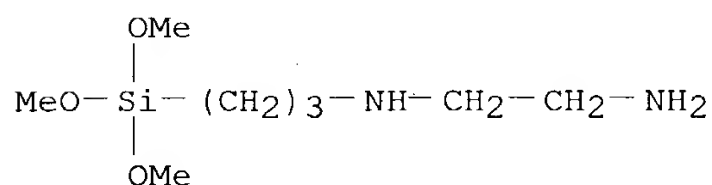
CRN 56-81-5  
CMF C3 H8 O3



RN 184974-77-4 HCAPLUS  
CN Hexanedioic acid, polymer with C,C'-bis(ethenyloxy)-1,1'-bicyclohexyl, 1,3-bis(isocyanatomethyl)cyclohexane, 2,2-diethyl-1,3-propanediol, 4-(ethenyloxy)-1-butanol, 2,5-furandione, 3-hydroxy-2-(hydroxymethyl)-2-methylpropanoic acid and 2-methyl-1,3-propanediol, compd. with N,N-diethylethanamine and N-[3-(trimethoxysilyl)propyl]-1,2-ethanediamine (9CI) (CA INDEX NAME)

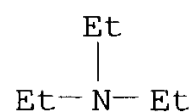
CM 1

CRN 1760-24-3  
CMF C8 H22 N2 O3 Si



CM 2

CRN 121-44-8  
CMF C6 H15 N

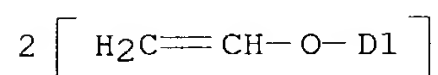
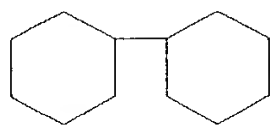


CM 3

CRN 184974-76-3  
CMF (C16 H26 O2 . C10 H14 N2 O2 . C6 H12 O2 . C6 H10 O4 . C5 H12 O2 . C5 H10 O4 . C4 H10 O2 . C4 H2 O3)x  
CCI PMS

CM 4

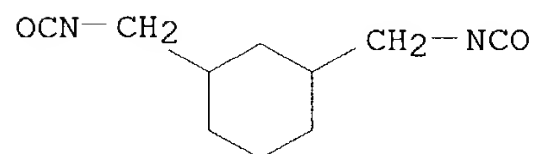
CRN 184974-75-2  
CMF C16 H26 O2  
CCI IDS



CM 5

CRN 38661-72-2

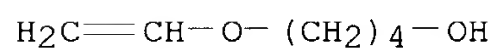
CMF C10 H14 N2 O2



CM 6

CRN 17832-28-9

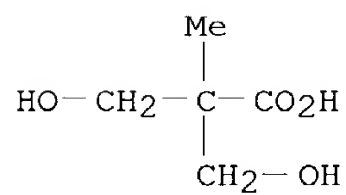
CMF C6 H12 O2



CM 7

CRN 4767-03-7

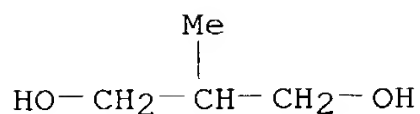
CMF C5 H10 O4



CM 8

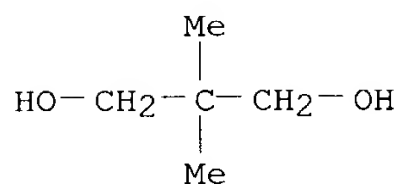
CRN 2163-42-0

CMF C4 H10 O2



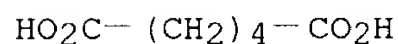
CM 9

CRN 126-30-7  
CMF C5 H12 O2



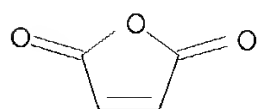
CM 10

CRN 124-04-9  
CMF C6 H10 O4



CM 11

CRN 108-31-6  
CMF C4 H2 O3

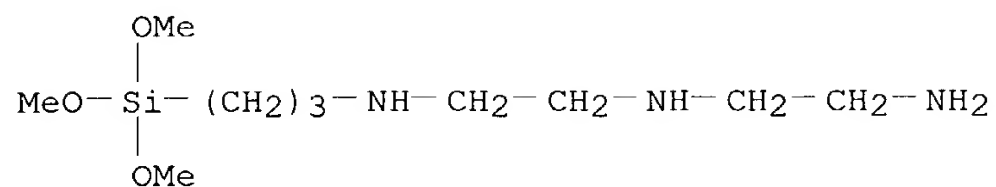


RN 185077-11-6 HCAPLUS

CN 1,3-Benzenedicarboxylic acid, polymer with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol, 3-hydroxy-2-(hydroxymethyl)-2-methylpropanoic acid, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane, 1,1'-methylenebis[4-isocyanatocyclohexane], 3-methyl-1,5-pentanediol and Viscoat 214HP, compd. with N-(2-aminoethyl)-N'-[3-(trimethoxysilyl)propyl]-1,2-ethanediamine and N,N-diethylethanamine (9CI) (CA INDEX NAME)

CM 1

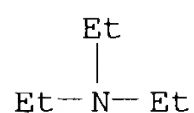
CRN 35141-30-1  
CMF C10 H27 N3 O3 Si



CM 2

CRN 121-44-8

CMF C6 H15 N



CM 3

CRN 185077-10-5

CMF (C15 H22 N2 O2 . C12 H18 N2 O2 . C8 H6 O4 . C6 H14 O3 . C6 H14 O2 . C5 H10 O4 . Unspecified)x

CCI PMS

CM 4

CRN 184973-30-6

CMF Unspecified

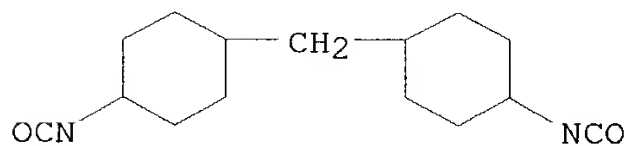
CCI MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 5

CRN 5124-30-1

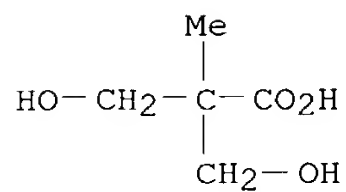
CMF C15 H22 N2 O2



CM 6

CRN 4767-03-7

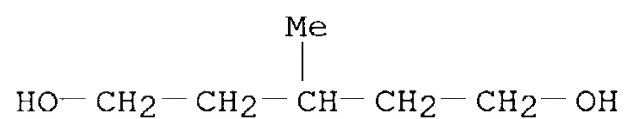
CMF C5 H10 O4



CM 7

CRN 4457-71-0

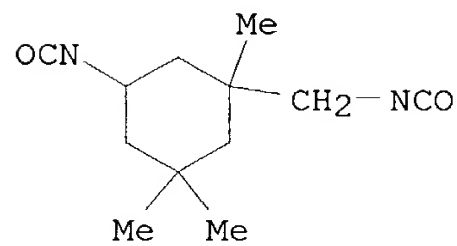
CMF C6 H14 O2



CM 8

CRN 4098-71-9

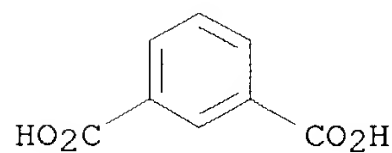
CMF C12 H18 N2 O2



CM 9

CRN 121-91-5

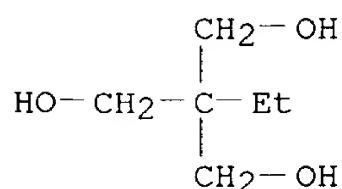
CMF C8 H6 O4



CM 10

CRN 77-99-6

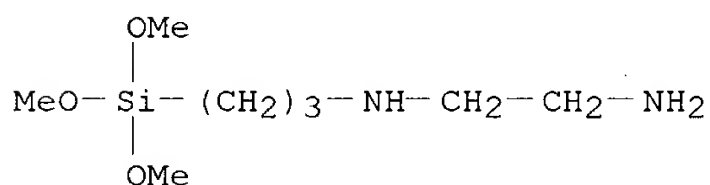
CMF C6 H4 O3



RN 185077-13-8 HCAPLUS  
 CN Propanoic acid, 3-hydroxy-2-(hydroxymethyl)-2-methyl-, polymer with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane, 1,1'-methylenebis[4-isocyanatocyclohexane],  $\alpha,\alpha'$ -[(1-methylethylidene)di-4,1-phenylene]bis[ $\omega$ -hydroxypoly[oxy(methyl-1,2-ethanediyl)]] and Viscoat 214HP, compd. with N,N-diethylethanamine and N-[3-(trimethoxysilyl)propyl]-1,2-ethanediamine (9CI) (CA INDEX NAME)

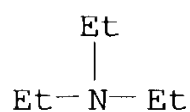
CM 1

CRN 1760-24-3  
 CMF C8 H22 N2 O3 Si



CM 2

CRN 121-44-8  
 CMF C6 H15 N



CM 3

CRN 185077-12-7  
 CMF (C15 H22 N2 O2 . C12 H18 N2 O2 . C6 H14 O3 . C5 H10 O4 . (C3 H6 O)n (C3 H6 O)n C15 H16 O2 . Unspecified)x  
 CCI PMS

CM 4

CRN 184973-30-6  
 CMF Unspecified  
 CCI MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

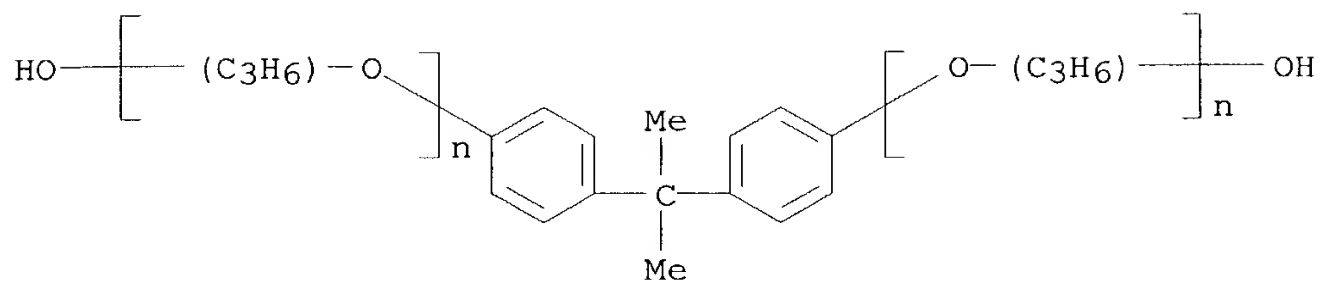


CM 5

CRN 37353-75-6

CMF (C3 H6 O)n (C3 H6 O)n C15 H16 O2

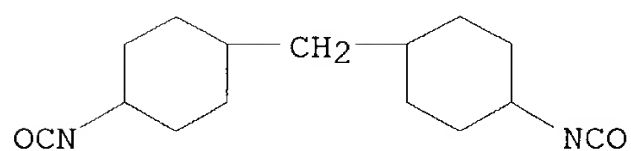
CCI IDS, PMS



CM 6

CRN 5124-30-1

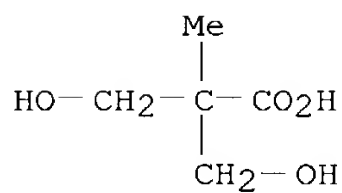
CMF C15 H22 N2 O2



CM 7

CRN 4767-03-7

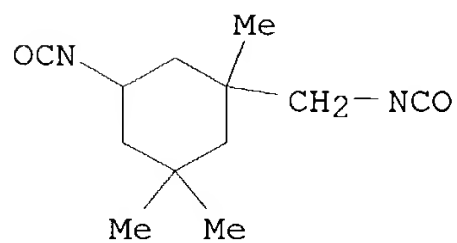
CMF C5 H10 O4



CM 8

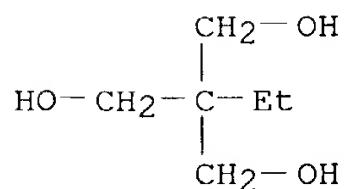
CRN 4098-71-9

CMF C12 H18 N2 O2



CM 9

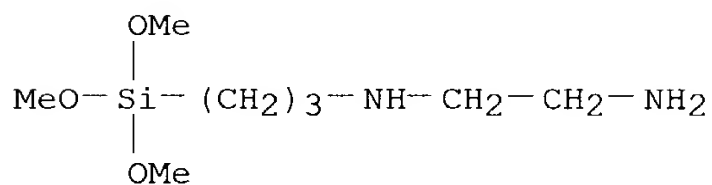
CRN 77-99-6  
CMF C6 H14 O3



RN 185077-15-0 HCAPLUS  
CN 1,3-Benzenedicarboxylic acid, polymer with Diclite UE 8200,  
2-ethyl-2-(hydroxymethyl)-1,3-propanediol, 3-hydroxy-2-(hydroxymethyl)-2-  
methylpropanoic acid, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-  
trimethylcyclohexane, 1,1'-methylenebis[4-isocyanatocyclohexane],  
3-methyl-1,5-pentanediol and Viscoat 214HP, compd. with  
N,N-diethylethanamine and N-[3-(trimethoxysilyl)propyl]-1,2-ethanediamine  
(9CI) (CA INDEX NAME)

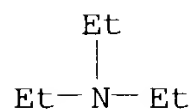
CM 1

CRN 1760-24-3  
CMF C8 H22 N2 O3 Si



CM 2

CRN 121-44-8  
CMF C6 H15 N



CM 3

CRN 185077-14-9  
CMF (C15 H22 N2 O2 . C12 H18 N2 O2 . C8 H6 O4 . C6 H14 O3 . C6 H14 O2 .  
C5 H10 O4 . Unspecified . Unspecified)x  
CCI PMS

CM 4

CRN 184973-30-6  
CMF Unspecified  
CCI MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

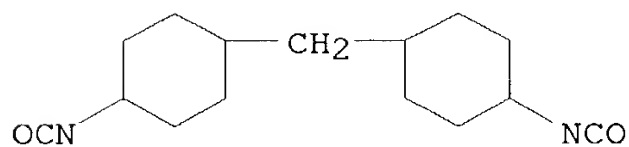
CM 5

CRN 78810-41-0  
CMF Unspecified  
CCI MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

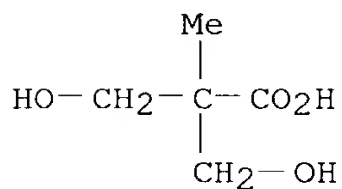
CM 6

CRN 5124-30-1  
CMF C15 H22 N2 O2



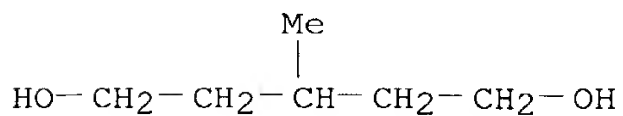
CM 7

CRN 4767-03-7  
CMF C5 H10 O4



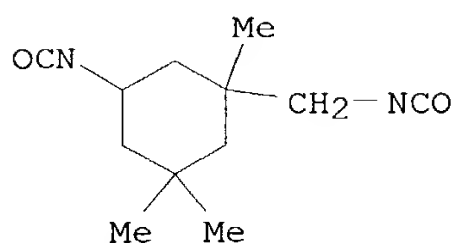
CM 8

CRN 4457-71-0  
CMF C6 H14 O2



CM 9

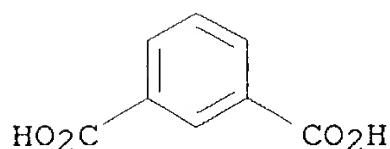
CRN 4098-71-9  
CMF C12 H18 N2 O2



CM 10

CRN 121-91-5

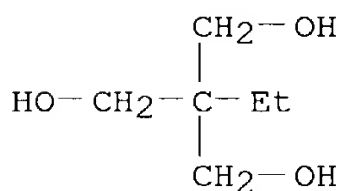
CMF C8 H6 O4



CM 11

CRN 77-99-6

CMF C6 H14 O3



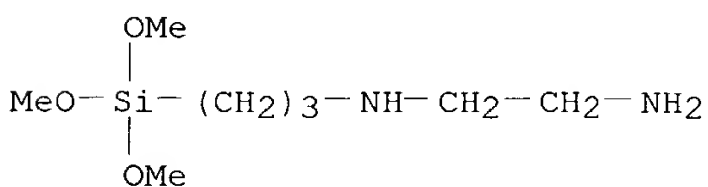
RN 185077-17-2 HCAPLUS

CN 1,3-Benzenedicarboxylic acid, polymer with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol, 3-hydroxy-2-(hydroxymethyl)-2-methylpropanoic acid, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane, 1,1'-methylenebis[4-isocyanatocyclohexane], 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis[oxirane] homopolymer di-2-propenoate, 3-methyl-1,5-pentanediol and Viscoat 214HP, compd. with N,N-diethylethanamine and N-[3-(trimethoxysilyl)propyl]-1,2-ethanediamine (9CI) (CA INDEX NAME)

CM 1

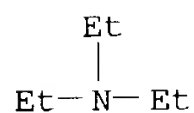
CRN 1760-24-3

CMF C8 H22 N2 O3 Si



CM 2

CRN 121-44-8  
CMF C6 H15 N



CM 3

CRN 185077-16-1  
CMF ((C21 H24 O4)x . C15 H22 N2 O2 . C12 H18 N2 O2 . C8 H6 O4 . C6 H14 O3  
. C6 H14 O2 . C5 H10 O4 . 2 C3 H4 O2 . Unspecified)x  
CCI PMS

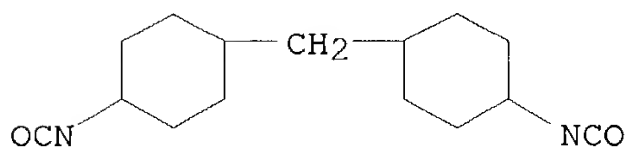
CM 4

CRN 184973-30-6  
CMF Unspecified  
CCI MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

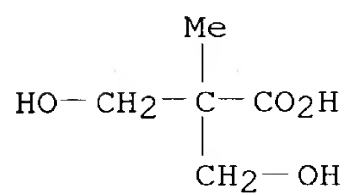
CM 5

CRN 5124-30-1  
CMF C15 H22 N2 O2



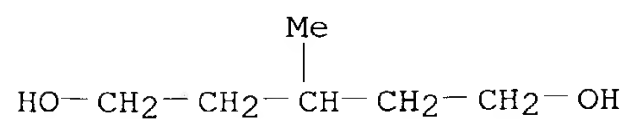
CM 6

CRN 4767-03-7  
CMF C5 H10 O4



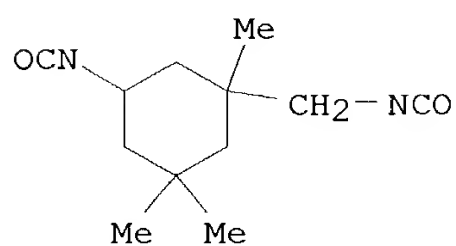
CM 7

CRN 4457-71-0  
CMF C6 H14 O2



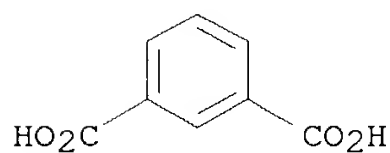
CM 8

CRN 4098-71-9  
CMF C12 H18 N2 O2



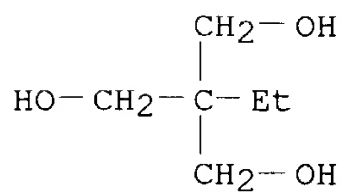
CM 9

CRN 121-91-5  
CMF C8 H6 O4



CM 10

CRN 77-99-6  
CMF C6 H14 O3

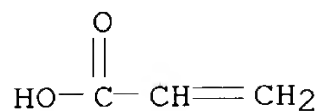


CM 11

CRN 55127-80-5  
CMF (C21 H24 O4) x . 2 C3 H4 O2

CM 12

CRN 79-10-7  
CMF C3 H4 O2

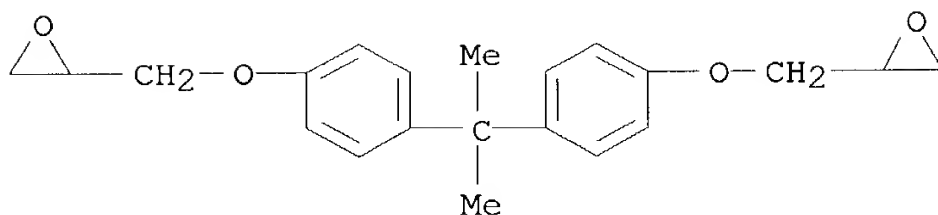


CM 13

CRN 25085-99-8  
CMF (C21 H24 O4) x  
CCI PMS

CM 14

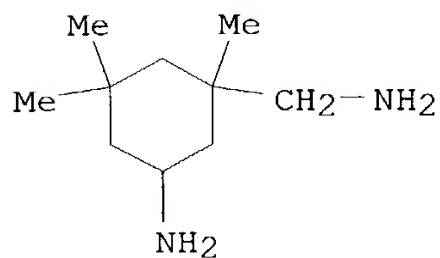
CRN 1675-54-3  
CMF C21 H24 O4



RN 185124-49-6 HCAPLUS  
CN 1,3-Benzenedicarboxylic acid, polymer with 1,3-bis(isocyanatomethyl)cyclohexane, 2-ethyl-2-(hydroxymethyl)-1,3-propanediol, 3-hydroxy-2-(hydroxymethyl)-2-methylpropanoic acid, 3-methyl-1,5-pentanediol, 1,2,3-propanetriol mono(2-methyl-2-propenoate) and Viscoat 214HP, compd. with 5-amino-1,3,3-trimethylcyclohexanemethanamine and N,N-diethylethanamine (9CI) (CA INDEX NAME)

CM 1

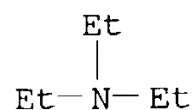
CRN 2855-13-2  
CMF C10 H22 N2



CM 2

CRN 121-44-8

CMF C6 H15 N



CM 3

CRN 185124-48-5

CMF (C10 H14 N2 O2 . C8 H6 O4 . C7 H12 O4 . C6 H14 O3 . C6 H14 O2 . C5 H10 O4 . Unspecified)x

CCI PMS

CM 4

CRN 184973-30-6

CMF Unspecified

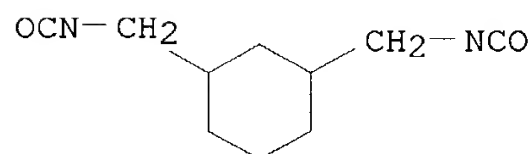
CCI MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 5

CRN 38661-72-2

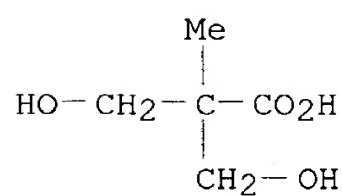
CMF C10 H14 N2 O2



CM 6

CRN 4767-03-7

CMF C5 H10 O4

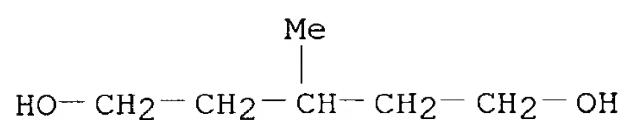


CM 7

CRN 4457-71-0

CMF C6 H14 O2

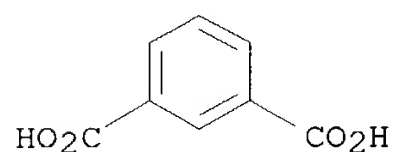




CM 8

CRN 121-91-5

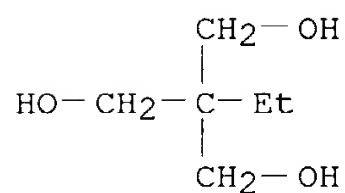
CMF C8 H6 O4



CM 9

CRN 77-99-6

CMF C6 H14 O3



CM 10

CRN 50853-28-6

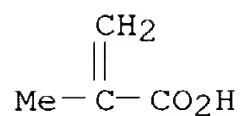
CMF C7 H12 O4

CCI IDS

CM 11

CRN 79-41-4

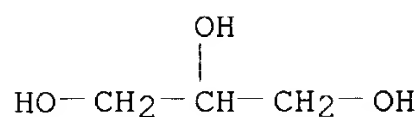
CMF C4 H6 O2



CM 12

CRN 56-81-5

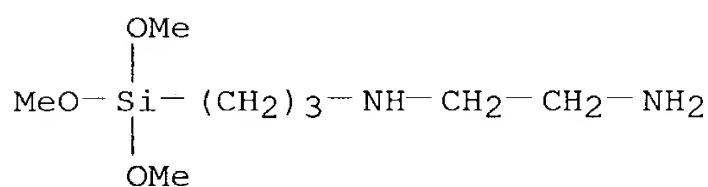
CMF C3 H8 O3



RN 185124-50-9 HCAPLUS  
 CN 1,3-Benzenedicarboxylic acid, polymer with 1,3-bis(isocyanatomethyl)cyclohexane, 2-ethyl-2-(hydroxymethyl)-1,3-propanediol, 3-hydroxy-2-(hydroxymethyl)-2-methylpropanoic acid, 3-methyl-1,5-pentanediol, 1,2,3-propanetriol mono(2-methyl-2-propenoate) and Viscoat 214HP, compd. with N,N-diethylethanamine and N-[3-(trimethoxysilyl)propyl]-1,2-ethanediamine (9CI) (CA INDEX NAME)

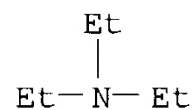
CM 1

CRN 1760-24-3  
 CMF C8 H22 N2 O3 Si



CM 2

CRN 121-44-8  
 CMF C6 H15 N



CM 3

CRN 185124-48-5  
 CMF (C10 H14 N2 O2 . C8 H6 O4 . C7 H12 O4 . C6 H14 O3 . C6 H14 O2 . C5 H10 O4 . Unspecified)x  
 CCI PMS

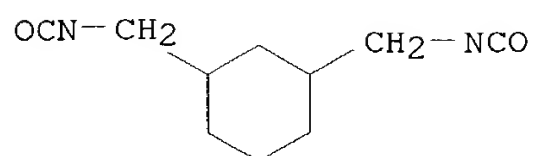
CM 4

CRN 184973-30-6  
 CMF Unspecified  
 CCI MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 5

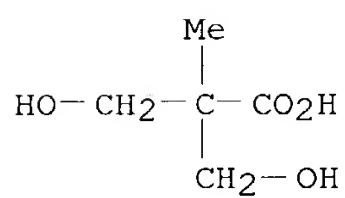
CRN 38661-72-2  
 CMF C10 H14 N2 O2



CM 6

CRN 4767-03-7

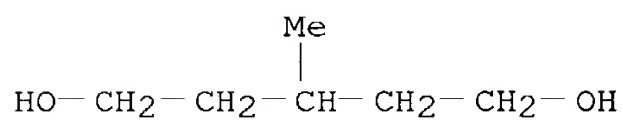
CMF C5 H10 O4



CM 7

CRN 4457-71-0

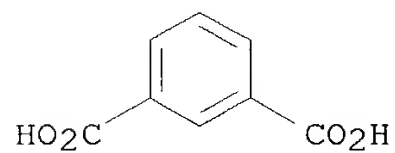
CMF C6 H14 O2



CM 8

CRN 121-91-5

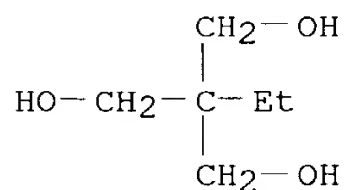
CMF C8 H6 O4



CM 9

CRN 77-99-6

CMF C6 H14 O3



CM 10

CRN 50853-28-6

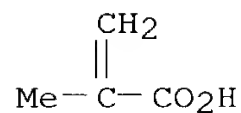
CMF C7 H12 O4

CCI IDS

CM 11

CRN 79-41-4

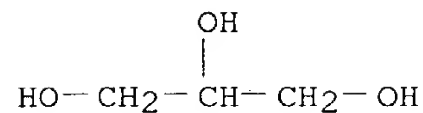
CMF C4 H6 O2



CM 12

CRN 56-81-5

CMF C3 H8 O3



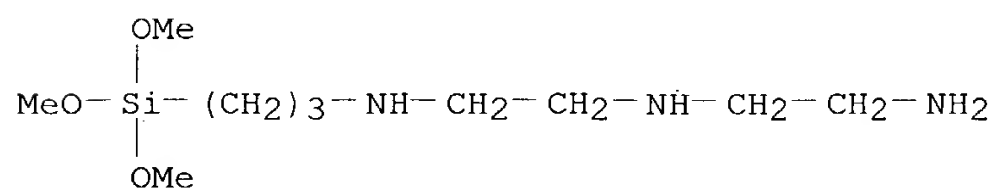
RN 185124-52-1 HCAPLUS

CN 1,3-Benzenedicarboxylic acid, polymer with 1,3-bis(isocyanatomethyl)cyclohexane, 2-ethyl-2-(hydroxymethyl)-1,3-propanediol, 3-hydroxy-2-(hydroxymethyl)-2-methylpropanoic acid, 3-methyl-1,5-pentanediol and Viscoat 214HP, compd. with N-(2-aminoethyl)-N'-[3-(trimethoxysilyl)propyl]-1,2-ethanediamine and N,N-diethylethanamine (9CI) (CA INDEX NAME)

CM 1

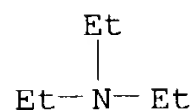
CRN 35141-30-1

CMF C10 H27 N3 O3 Si



CM 2

CRN 121-44-8  
CMF C6 H15 N



CM 3

CRN 185124-51-0  
CMF (C10 H14 N2 O2 . C8 H6 O4 . C6 H14 O3 . C6 H14 O2 . C5 H10 O4 .  
Unspecified)x  
CCI PMS

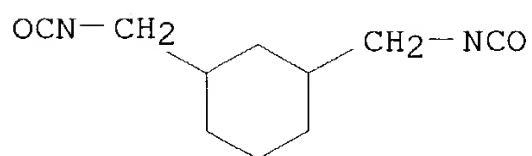
CM 4

CRN 184973-30-6  
CMF Unspecified  
CCI MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

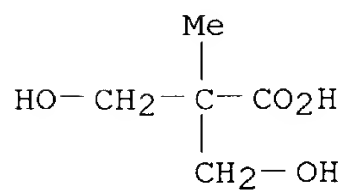
CM 5

CRN 38661-72-2  
CMF C10 H14 N2 O2



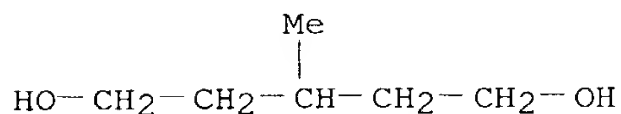
CM 6

CRN 4767-03-7  
CMF C5 H10 O4



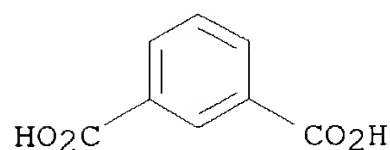
CM 7

CRN 4457-71-0  
CMF C6 H14 O2



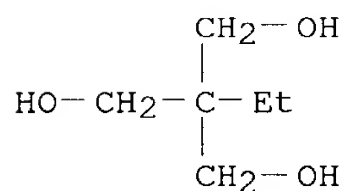
CM 8

CRN 121-91-5  
CMF C8 H6 O4



CM 9

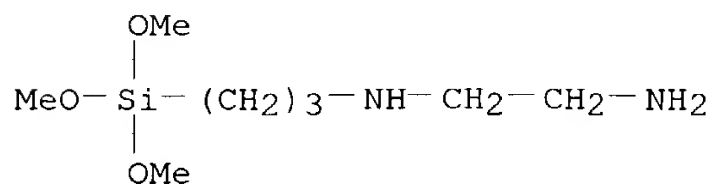
CRN 77-99-6  
CMF C6 H14 O3



RN 185528-33-0 HCAPLUS  
CN 1,3-Benzenedicarboxylic acid, polymer with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol, 3-hydroxy-2-(hydroxymethyl)-2-methylpropanoic acid, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane, 1,1'-methylenebis[4-isocyanatocyclohexane], 3-methyl-1,5-pentanediol, 2,2'-[oxybis(methylene)]bis[2-(hydroxymethyl)-1,3-propanediol] 2-propenoate and Viscoat 214HP, compd. with N,N-diethylethanamine and N-[3-(trimethoxysilyl)propyl]-1,2-ethanediamine (9CI) (CA INDEX NAME)

CM 1

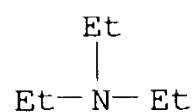
CRN 1760-24-3  
CMF C8 H22 N2 O3 Si



CM 2

CRN 121-44-8

CMF C6 H15 N



CM 3

CRN 185528-32-9

CMF (C15 H22 N2 O2 . C12 H18 N2 O2 . C10 H22 O7 . C8 H6 O4 . C6 H14 O3 .  
C6 H14 O2 . C5 H10 O4 . x C3 H4 O2 . Unspecified)x

CCI PMS

CM 4

CRN 184973-30-6

CMF Unspecified

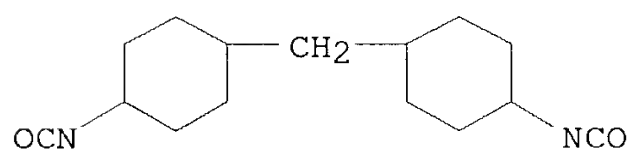
CCI MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 5

CRN 5124-30-1

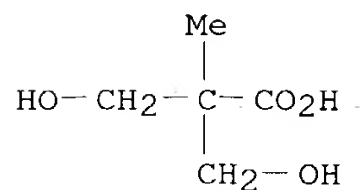
CMF C15 H22 N2 O2



CM 6

CRN 4767-03-7

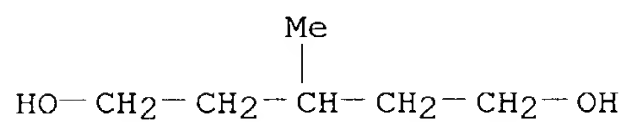
CMF C5 H10 O4



CM 7

CRN 4457-71-0

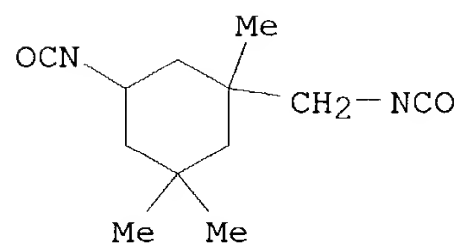
CMF C6 H14 O2



CM 8

CRN 4098-71-9

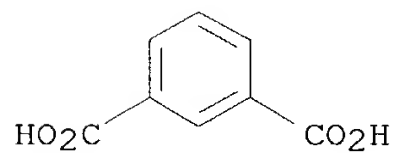
CMF C12 H18 N2 O2



CM 9

CRN 121-91-5

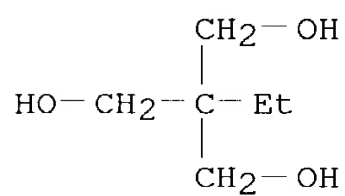
CMF C8 H6 O4



CM 10

CRN 77-99-6

CMF C6 H14 O3



CM 11

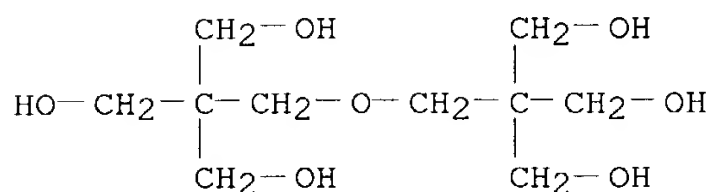
CRN 77641-99-7

CMF C10 H22 O7 . x C3 H4 O2

CM 12

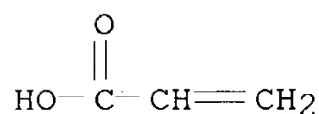


CRN 126-58-9  
CMF C10 H22 O7



CM 13

CRN 79-10-7  
CMF C3 H4 O2



L56 ANSWER 21 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN  
AN 1996:672885 HCAPLUS  
DN 126:76226  
TI **Aqueous** two-part isocyanate-free curable, polyurethane resin systems with long pot life  
IN Song, Zhiqiang  
PA Guertin Bros. Coatings and Sealants Ltd., Can.  
SO U.S., 45 pp., Cont.-in-part of U.S. Ser. No. 58,240, abandoned.  
CODEN: USXXAM  
DT Patent  
LA English  
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5567761	A	19961022	US 1994-313837	19940928
	WO 9516749	A1	19950622	WO 1994-CA680	19941213
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
PRAI	US 1993-58240		19930510		
	US 1993-165643		19931213		
	US 1994-313837		19940928		
AB	<p><b>Waterborne coating</b> compns. contain (A) an acetoacetylated polymer; and (B) a polyacrylate having <math>\geq 2</math> (meth)acrylate end groups, have long pot lives and may be cured by the evaporation of <b>water</b> in the presence of a basic catalyst. Acrylic copolymers having pendent urethane side groups which are terminated with (meth)acrylate groups are <b>water</b>-dispersible and may be cured with polyfunctional <b>crosslinking</b> agents or by free radical initiators to afford <b>coatings</b> having excellent properties. Incorporation of a <b>crosslinking</b> component containing epoxy groups improves the <b>coating</b> properties. An NCO-free urethane polyacrylate (I, 72% solids) was prepared from IPDI trimer and hydroxypropyl acrylate (HPA) and a <b>water</b>-dispersible urethane polyacrylate (II, 71% solids) from diethylene glycol, IPDI and HPA. A clear <b>coating</b> solution contained I 35.8, II 30.7, trimethylolpropane</p>				

triaceaoate 7.6, diethylene glycol di-Me ether 24.1, and  
1,1,3,3-tetramethylguanidine 1.85 part and exhibited a gel time of 70 min.

IC ICM C08J003-00  
ICS C08F008-30; C08L075-00

NCL 524523000

CC 42-10 (**Coatings**, Inks, and Related Products)

ST **waterborne** polyurethane **coating** compn; acetoacetylated  
polymer urethane acrylate **coating**

IT Polyurethanes, uses  
Polyurethanes, uses  
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or  
engineered material use); USES (Uses)  
(acrylic-epoxy; **aqueous** two-part isocyanate-free curable,  
polyurethane resin systems with long pot life)

IT Epoxy resins, uses  
Epoxy resins, uses  
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or  
engineered material use); USES (Uses)  
(acrylic-polyurethane-; **aqueous** two-part isocyanate-free curable,  
polyurethane resin systems with long pot life)

IT Polyurethanes, uses  
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or  
engineered material use); USES (Uses)  
(acrylic; **aqueous** two-part isocyanate-free curable, polyurethane  
resin systems with long pot life)

IT Michael reaction  
(**aqueous** two-part isocyanate-free curable, polyurethane resin  
systems with long pot life)

IT **Crosslinking** agents  
(epoxy compound and polyacetoacetate; **aqueous** two-part  
isocyanate-free curable, polyurethane resin systems with long pot life)

IT **Coating** materials  
(**water**-thinned; **aqueous** two-part isocyanate-free  
curable, polyurethane resin systems with long pot life)

IT 103-71-9DP, Phenyl isocyanate, reaction product with pentaerythritol  
triaceaoacetate 22208-25-9P, Trimethylolpropane triaceaoacetate  
25584-83-2DP, Hydroxypropyl acrylate, reaction product with HDI trimer  
28574-90-5DP, reaction product with hydroxypropyl acrylate 94947-08-7DP,  
reaction product with **Ph** isocyanate 172156-65-9DP, reaction  
product with **Ph** isocyanate  
RL: PNU (Preparation, unclassified); RCT (Reactant); PREP (Preparation);  
RACT (Reactant or reagent)  
(**aqueous** two-part isocyanate-free curable, polyurethane resin  
systems with long pot life)

IT 25068-38-6D, acrylic polyurethanes **183547-96-8** 183547-97-9  
183547-98-0 183547-99-1 183683-34-3 183683-34-3D, reaction product  
with Epon 828 and urethane polyacetoacetate 183683-35-4 183683-36-5  
183683-37-6 183683-38-7 183683-39-8 183683-40-1 183683-41-2  
183683-42-3 183683-43-4 183683-44-5 183683-45-6 **183683-46-7**  
183683-47-8 183683-48-9, IPDI trimer-hydroxypropyl acrylate-  
trimethylolpropane triaceaoacetate-methyl methacrylate-butyl  
acrylate-2-hydroxyethyl methacrylate-2-acetoacetoxyethyl methacrylate  
copolymer **183683-49-0** 183683-50-3 183683-51-4 183683-52-5  
183683-53-6 183683-54-7 183683-55-8 183683-56-9, Hydroxypropyl  
methacrylate-methyl methacrylate-butyl methacrylate-acetoacetoxyethyl  
methacrylate-acrylic acid-IPDI trimer-hydroxypropyl acrylate-  
trimethylolpropane triacrylate copolymer **183817-50-7**  
**183870-83-9 183973-47-9**

RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

(**aqueous** two-part isocyanate-free curable, polyurethane resin systems with long pot life)

IT 77-99-6 105-45-3, Methyl acetoacetate

RL: RCT (Reactant); RACT (Reactant or reagent)

(**aqueous** two-part isocyanate-free curable, polyurethane resin systems with long pot life)

IT **183547-96-8 183683-46-7 183683-49-0**

**183817-50-7 183870-83-9 183973-47-9**

RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

(**aqueous** two-part isocyanate-free curable, polyurethane resin systems with long pot life)

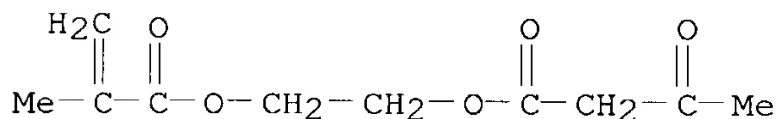
RN 183547-96-8 HCAPLUS

CN Butanoic acid, 3-oxo-, 2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl ester, polymer with butyl 2-methyl-2-propenoate, 2-ethyl-2-[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate, 2-hydroxyethyl 2-propenoate, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane, methyl 2-methyl-2-propenoate, 2,2'-oxybis[ethanol] and 2-propenoic acid (9CI) (CA INDEX NAME)

CM 1

CRN 21282-97-3

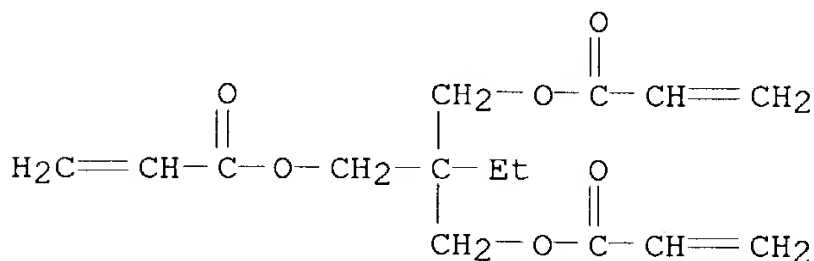
CMF C10 H14 O5



CM 2

CRN 15625-89-5

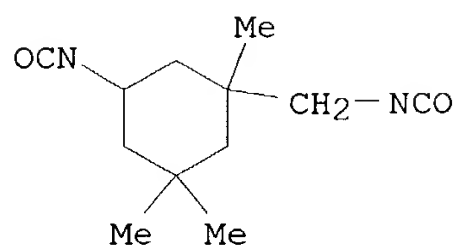
CMF C15 H20 O6



CM 3

CRN 4098-71-9

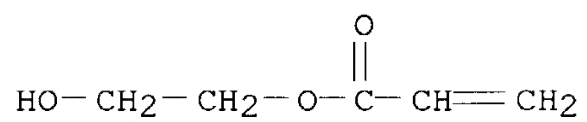
CMF C12 H18 N2 O2



CM 4

CRN 818-61-1

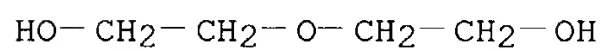
CMF C5 H8 O3



CM 5

CRN 111-46-6

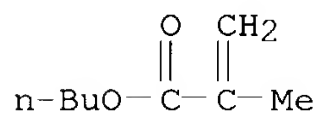
CMF C4 H10 O3



CM 6

CRN 97-88-1

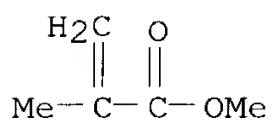
CMF C8 H14 O2



CM 7

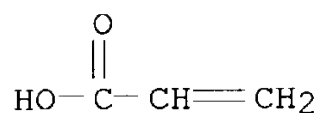
CRN 80-62-6

CMF C5 H8 O2



CM 8

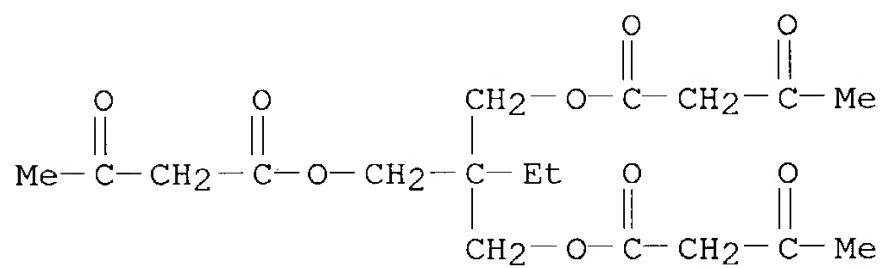
CRN 79-10-7  
CMF C3 H4 O2



RN	183683-46-7	HCAPLUS
CN	Butanoic acid, 3-oxo-, 2-[(1,3-dioxobutoxy)methyl]-2-ethyl-1,3-propanediyl ester, polymer with 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane trimer, 2,2'-oxybis[ethanol] and 1,2-propanediol mono-2-propenoate (9CI) (CA INDEX NAME)	

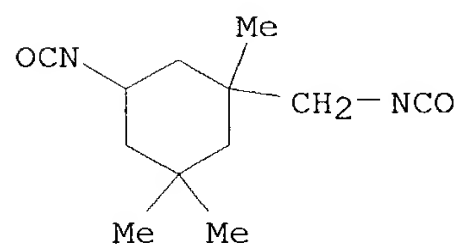
CM 1

CRN 22208-25-9  
CMF C18 H26 O9



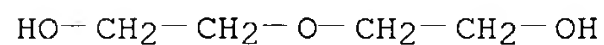
CM 2

CRN 4098-71-9  
CMF C12 H18 N2 O2



CM 3

CRN 111-46-6  
CMF C4 H10 O3

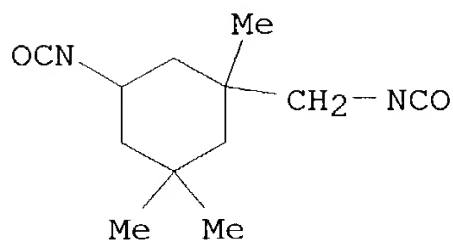


CM 4

CRN 53895-32-2  
CMF (C12 H18 N2 O2)3  
CCI PMS

CM 5

CRN 4098-71-9  
CMF C12 H18 N2 O2

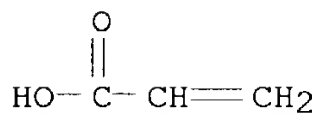


CM 6

CRN 25584-83-2  
CMF C6 H10 O3  
CCI IDS

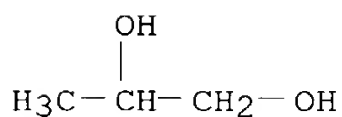
CM 7

CRN 79-10-7  
CMF C3 H4 O2



CM 8

CRN 57-55-6  
CMF C3 H8 O2



RN 183683-49-0 HCAPLUS  
CN Butanoic acid, 3-oxo-, 2-[(1,3-dioxobutoxy)methyl]-2-ethyl-1,3-propanediyl ester, polymer with 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane trimer, 2,2'-oxybis[ethanol], Poly-G 55-112 and 1,2-propanediol mono-2-propenoate (9CI) (CA INDEX NAME)

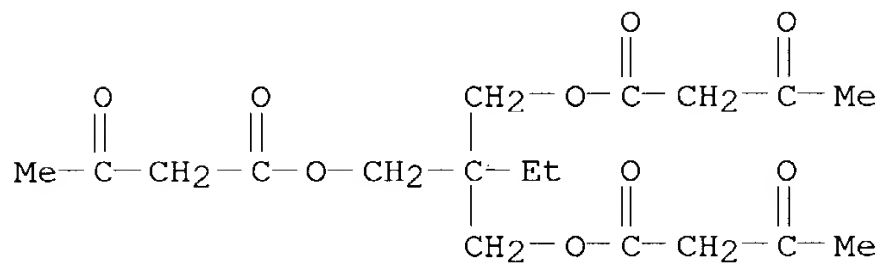
CM 1

CRN 86418-36-2  
CMF Unspecified  
CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

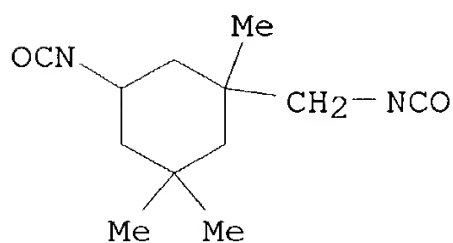
CM 2

CRN 22208-25-9  
CMF C18 H26 O9



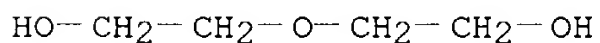
CM 3

CRN 4098-71-9  
CMF C12 H18 N2 O2



CM 4

CRN 111-46-6  
CMF C4 H10 O3

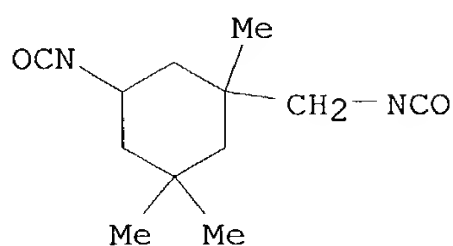


CM 5

CRN 53895-32-2  
CMF (C12 H18 N2 O2) 3  
CCI PMS

CM 6

CRN 4098-71-9  
CMF C12 H18 N2 O2



CM 7

CRN 25584-83-2

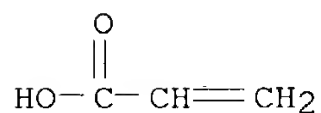
CMF C6 H10 O3

CCI IDS

CM 8

CRN 79-10-7

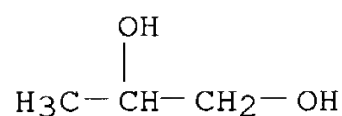
CMF C3 H4 O2



CM 9

CRN 57-55-6

CMF C3 H8 O2



RN 183817-50-7 HCAPLUS

CN Butanoic acid, 3-oxo-, 2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl ester, polymer with 2,2-bis[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate, butyl 2-propenoate, 2-ethyl-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate, 2-hydroxyethyl 2-methyl-2-propenoate, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane trimer, methyl 2-methyl-2-propenoate, 2,2'-oxybis[ethanol], Poly-G 55-112 and 1,2-propanediol mono-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 86418-36-2

CMF Unspecified

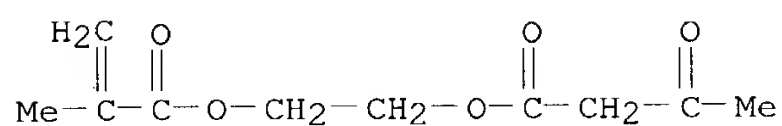
CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*



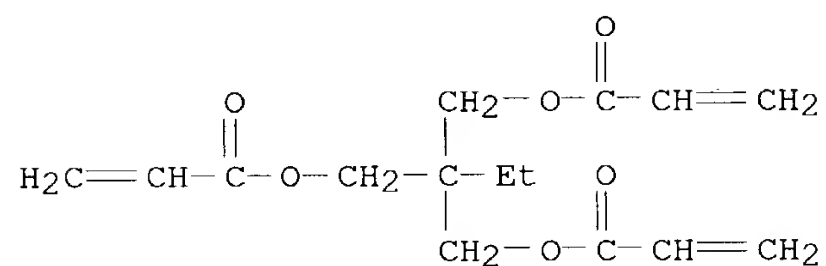
CM 2

CRN 21282-97-3  
CMF C10 H14 O5



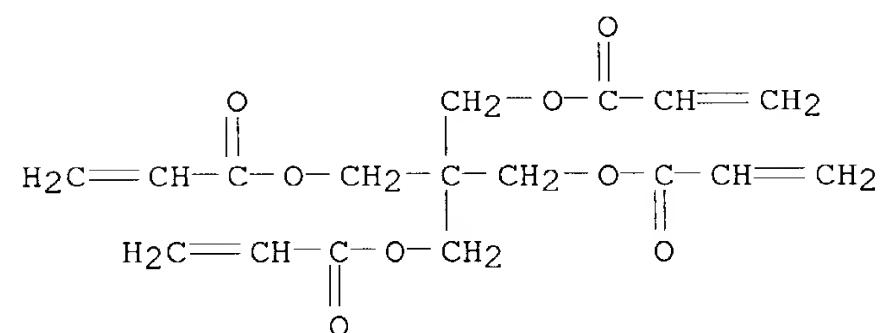
CM 3

CRN 15625-89-5  
CMF C15 H20 O6



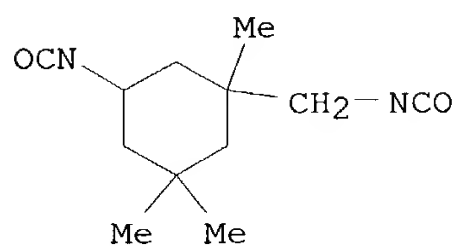
CM 4

CRN 4986-89-4  
CMF C17 H20 O8



CM 5

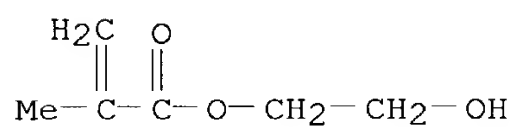
CRN 4098-71-9  
CMF C12 H18 N2 O2



CM 6

CRN 868-77-9

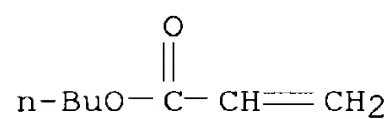
CMF C6 H10 O3



CM 7

CRN 141-32-2

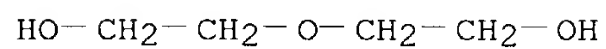
CMF C7 H12 O2



CM 8

CRN 111-46-6

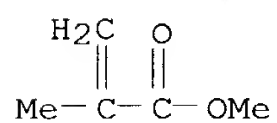
CMF C4 H10 O3



CM 9

CRN 80-62-6

CMF C5 H8 O2

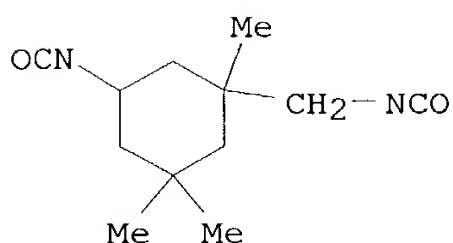


CM 10

CRN 53895-32-2  
CMF (C12 H18 N2 O2)3  
CCI PMS

CM 11

CRN 4098-71-9  
CMF C12 H18 N2 O2

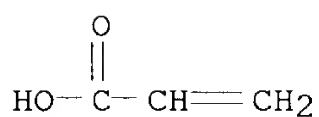


CM 12

CRN 25584-83-2  
CMF C6 H10 O3  
CCI IDS

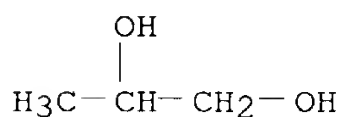
CM 13

CRN 79-10-7  
CMF C3 H4 O2



CM 14

CRN 57-55-6  
CMF C3 H8 O2



RN 183870-83-9 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, polymer with butyl 2-methyl-2-propenoate, (chloromethyl)oxirane, cyclohexyl 2-methyl-2-propenoate, ethenylbenzene, 2-ethylhexyl 2-methyl-2-propenoate, GPacryl 513, 2-hydroxyethyl 2-methyl-2-propenoate, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane, 4,4'-(1-methylethylidene)bis[phenol], 1,2-propanediol mono-2-propenoate, 2-propenoic acid and Tone M 100 (9CI) (CA INDEX NAME)

CM 1

CRN 183748-50-7  
CMF Unspecified  
CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

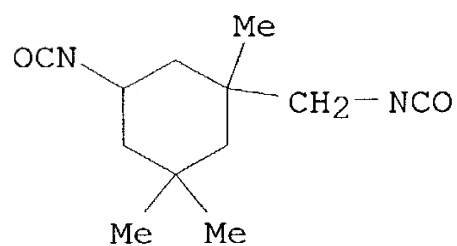
CM 2

CRN 101484-78-0  
CMF Unspecified  
CCI MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

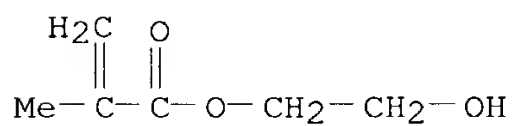
CM 3

CRN 4098-71-9  
CMF C12 H18 N2 O2



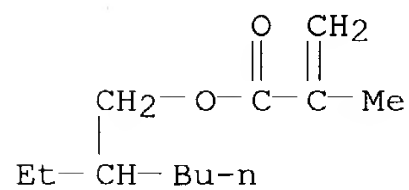
CM 4

CRN 868-77-9  
CMF C6 H10 O3



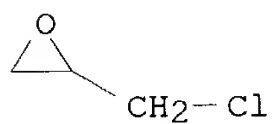
CM 5

CRN 688-84-6  
CMF C12 H22 O2



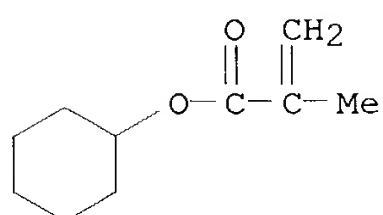
CM 6

CRN 106-89-8  
CMF C3 H5 Cl O



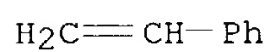
CM 7

CRN 101-43-9  
CMF C10 H16 O2



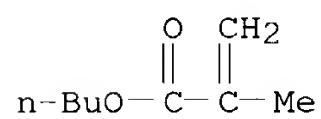
CM 8

CRN 100-42-5  
CMF C8 H8



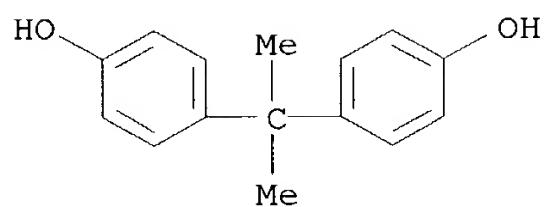
CM 9

CRN 97-88-1  
CMF C8 H14 O2



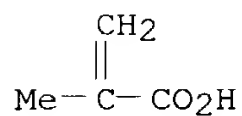
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CRN 80-05-7  
CMF C15 H16 O2



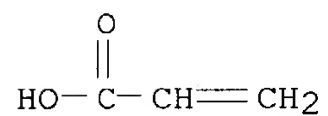
CM 11

CRN 79-41-4  
CMF C4 H6 O2



CM 12

CRN 79-10-7  
CMF C3 H4 O2

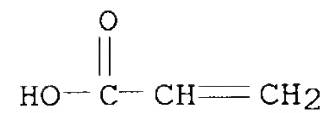


CM 13

CRN 25584-83-2  
CMF C6 H10 O3  
CCI IDS

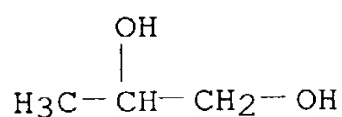
CM 14

CRN 79-10-7  
CMF C3 H4 O2



CM 15

CRN 57-55-6  
CMF C3 H8 O2



RN 183973-47-9 HCAPLUS

CN Butanoic acid, 3-oxo-, 2-[(1,3-dioxobutoxy)methyl]-2-ethyl-1,3-propanediyl ester, polymer with butyl 2-methyl-2-propenoate, butyl 2-propenoate, (chloromethyl)oxirane, cyclohexyl 2-methyl-2-propenoate, 1,6-diisocyanatohexane, ethenylbenzene, 2-hydroxyethyl 2-methyl 2-propenoate, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane, 4,4'-(1-methylethylidene)bis[phenol], 2-methyl-2-propenoic acid, 1,2-propanediol mono-2-propenoate, 2-propenoic acid and Tone M 100 (9CI) (CA INDEX NAME)

CM 1

CRN 101484-78-0

CMF Unspecified

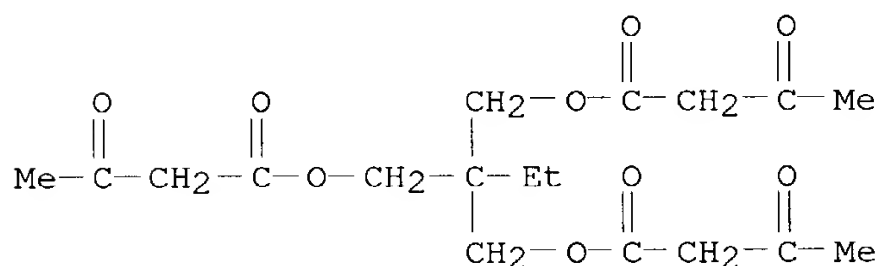
CCI MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 2

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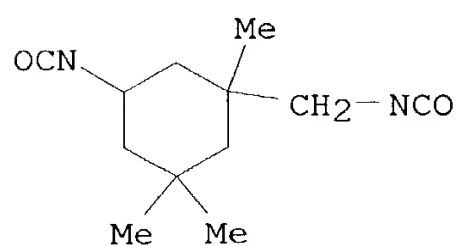
CMF C18 H26 O9



CM 3

CRN 4098-71-9

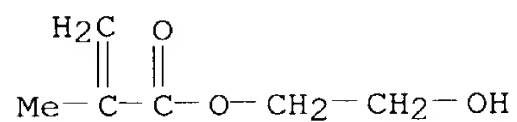
CMF C12 H18 N2 O2



CM 4

CRN 868-77-9

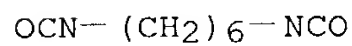
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CM 5

CRN 822-06-0

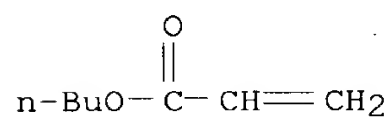
CMF C8 H12 N2 O2



CM 6

CRN 141-32-2

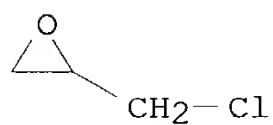
CMF C7 H12 O2



CM 7

CRN 106-89-8

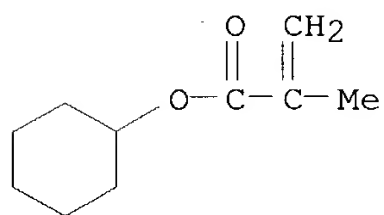
CMF C3 H5 Cl O



CM 8

CRN 101-43-9

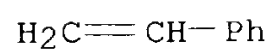
CMF C10 H16 O2





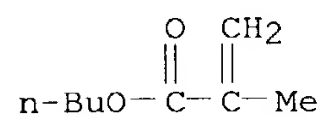
CM 9

CRN 100-42-5  
CMF C8 H8



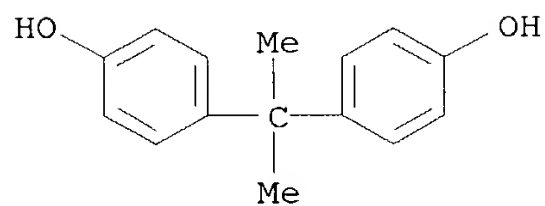
CM 10

CRN 97-88-1  
CMF C8 H14 O2



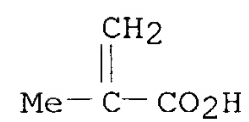
CM 11

CRN 80-05-7  
CMF C15 H16 O2



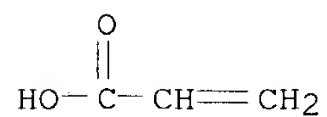
CM 12

CRN 79-41-4  
CMF C4 H6 O2



CM 13

CRN 79-10-7  
CMF C3 H4 O2

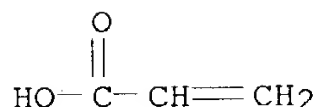


CM 14

CRN 25584-83-2  
CMF C6 H10 O3  
CCI IDS

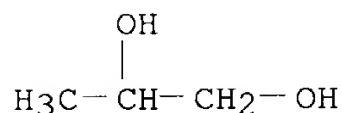
CM 15

CRN 79-10-7  
CMF C3 H4 O2



CM 16

CRN 57-55-6  
CMF C3 H8 O2



L56 ANSWER 22 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1996:380226 HCAPLUS

DN 125:116153

TI Low-temperature self-**crosslinking aqueous acrylic-urethane-epoxy-polyester**

-vinyl polymers for **coating** applications

IN Tien, Chao Fong; Mao, Chung Ling; Snyder, Jeanine M.; Beck, Adalgery

PA Air Products and Chemicals, Inc., USA

SO U.S., 6 pp.

CODEN: USXXAM

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5521246	A	19960528	US 1994-280047	19940725
	US 5977215	A	19991102	US 1997-876785	19970616
PRAI	US 1994-280047		19940725		
	US 1995-555237		19951108		

AB **Aqueous polyurethane**-vinyl polymer dispersions are prepared by (1) forming a carboxy-containing, **water**-dispersible, isocyanate-terminated **polyurethane** prepolymer containing pendant carboxylic acid groups, (2) reacting the prepolymer with a dihydroxyalkanoic acid, (3) adding a vinyl monomer mixture containing a glycidyl ether of a C1-6-alkyl **acrylate** or **methacrylate** to the

prepolymer to make a prepolymer/monomer mixture, (4) adding a tertiary amine to quaternize the pendant carboxylic acid groups on the isocyanate-terminated prepolymer, (5) dispersing the prepolymer-monomer mixture in **water**, (6) polymerizing the vinyl monomer, and (7) incorporating into the dispersion a polymer having pendant **epoxide** groups (especially 0.5-5 **epoxide** groups per carboxylic acid group). When the **aqueous** dispersions are cast as a **film** and the **water** removed, **crosslinking** between the carboxyl group and **epoxide** group occurs. Such dispersions have improved shelf stability and low-temperature self-**crosslinking** ability when the polyurethane moiety has the carboxyl functionality in quaternary form and the overall polymer has pendant **epoxide** groups.

IC ICM C08L075-00  
NCL 524507000  
CC 37-1 (Plastics Manufacture and Processing)  
Section cross-reference(s): **42**  
ST **polyester** polyurethane self **crosslinking**  
**coating; acrylic** vinyl urethane self  
**crosslinking; epoxy** urethane **acrylic** self  
**crosslinking**  
IT Urethane polymers, preparation  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP  
(Properties); RCT (Reactant); SPN (Synthetic preparation); PREP  
(Preparation); RACT (Reactant or reagent); USES (Uses)  
(**acrylic-epoxy-polyester-vinyl-**;  
low-temperature self-**crosslinking aqueous acrylic-**  
**urethane-epoxy-polyester-vinyl** dispersions  
for **coating** applications)  
IT **Polyesters**, preparation  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP  
(Properties); RCT (Reactant); SPN (Synthetic preparation); PREP  
(Preparation); RACT (Reactant or reagent); USES (Uses)  
(**acrylic-epoxy-urethane-vinyl-**; low-temperature  
self-**crosslinking aqueous acrylic-**  
**urethane-epoxy-polyester-vinyl** dispersions  
for **coating** applications)  
IT **Epoxy** resins, preparation  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP  
(Properties); RCT (Reactant); SPN (Synthetic preparation); PREP  
(Preparation); RACT (Reactant or reagent); USES (Uses)  
(**acrylic-polyester-urethane-vinyl-**;  
low-temperature self-**crosslinking aqueous acrylic-**  
**urethane-epoxy-polyester-vinyl** dispersions  
for **coating** applications)  
IT **Coating** materials  
(abrasion-resistant, anticorrosive, low-temperature self-**crosslinking**  
**aqueous acrylic-urethane-epoxy-**  
**polyester-vinyl** dispersions for **coating** applications)  
IT **Crosslinking**  
(auto-, low-temperature self-**crosslinking aqueous**  
**acrylic-urethane-epoxy-polyester**  
-vinyl dispersions for **coating** applications)  
IT Vinyl compounds, preparation  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP  
(Properties); RCT (Reactant); SPN (Synthetic preparation); PREP  
(Preparation); RACT (Reactant or reagent); USES (Uses)  
(polymers, **acrylic-epoxy-polyester-**  
**urethane-**; low-temperature self-**crosslinking aqueous**

**acrylic-urethane-epoxy-polyester**  
-vinyl dispersions for **coating** applications)

IT Amines, uses  
RL: MOA (Modifier or additive use); USES (Uses)  
(tertiary, chain extenders; low-temperature self-**crosslinking**  
**aqueous acrylic-urethane-epoxy-**  
**polyester**-vinyl dispersions for **coating** applications)

IT **179176-34-2P**  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP  
(Properties); RCT (Reactant); SPN (Synthetic preparation); PREP  
(Preparation); RACT (Reactant or reagent); USES (Uses)  
(low-temperature self-**crosslinking aqueous acrylic-**  
**urethane-epoxy-polyester**-vinyl dispersions  
for **coating** applications)

IT **179176-34-2P**  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP  
(Properties); RCT (Reactant); SPN (Synthetic preparation); PREP  
(Preparation); RACT (Reactant or reagent); USES (Uses)  
(low-temperature self-**crosslinking aqueous acrylic-**  
**urethane-epoxy-polyester**-vinyl dispersions  
for **coating** applications)

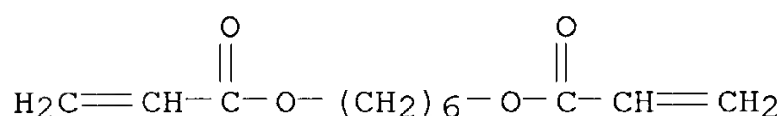
RN 179176-34-2 HCAPLUS

CN Octanedioic acid, polymer with butyl 2-methyl-2-propenoate,  
N,N-dimethylmethanamine, 2,2-dimethyl-1,3-propanediol, 1,2-ethanediamine,  
1,6-hexanediyl di-2-propenoate, 3-hydroxy-2-(hydroxymethyl)-2-  
methylpropanoic acid, 1,1'-methylenebis[4-isocyanatocyclohexane] and  
oxiranylmethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 13048-33-4

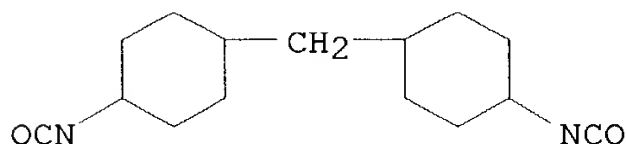
CMF C12 H18 O4



CM 2

CRN 5124-30-1

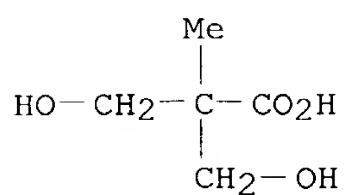
CMF C15 H22 N2 O2



CM 3

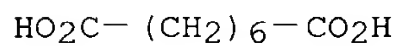
CRN 4767-03-7

CMF C5 H10 O4



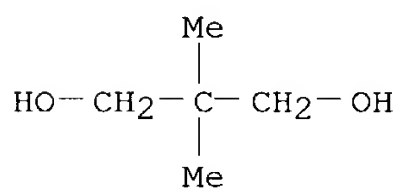
CM 4

CRN 505-48-6  
CMF C8 H14 O4



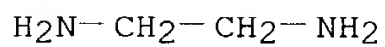
CM 5

CRN 126-30-7  
CMF C5 H12 O2



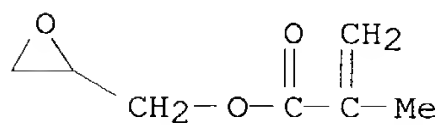
CM 6

CRN 107-15-3  
CMF C2 H8 N2



CM 7

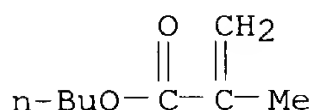
CRN 106-91-2  
CMF C7 H10 O3



CM 8

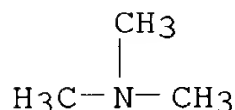
CRN 97-88-1

CMF C8 H14 O2



CM 9

CRN 75-50-3  
CMF C3 H9 N



L56 ANSWER 23 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1995:997431 HCAPLUS

DN 124:148932

TI **Water**-thinned printing ink compositions, methods for making same and uses thereof

IN Vanderhoff, John W.; Huwart, Philippe

PA Lehigh University, USA

SO PCT Int. Appl., 41 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9528436	A1	19951026	WO 1995-US5132	19950418
	W: CA, JP				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	CA 2188148	AA	19951026	CA 1995-2188148	19950418
	EP 756609	A1	19970205	EP 1995-917163	19950418
	R: BE, DE, FR, GB, IT, NL				
PRAI	US 1994-229557	A	19940419		
	WO 1995-US5132	W	19950418		

AB **Aqueous**-based printing ink compns. adapted for use in gravure and flexog. printing on hydrophobic metal and plastic substrates are prepared by combining a low-viscosity resin emulsion having an average particle diameter of less than about 0.5  $\mu$  and comprised of hydrophobic, moisture resistant, adherent resin forming components with a pigment paste containing a **water**-soluble polymer. The printing inks are substantially devoid of volatile organic solvent, and the photocured ink **films** are highly resistant to **water**. A typical ink with good adhesion to polycarbonate **film** contained 21.8% Novocure 3600 (amine-modified bisphenol A **epoxy** resin **diacrylate**)-trimethylolpropane **triacrylate** copolymer emulsion, 75.8% pigment paste containing TiO2 46, Joncryl 678 (**acrylic** acid copolymer) 11, and Joncryl 90 (I, styrene copolymer) emulsion 9.5%, and 2.4% varnish containing **water** 34.305, Joncryl 679 (**acrylic** acid-styrene copolymer emulsion) 29.23, I 25.58, iso-PrOH 4.385, aminopropanol 1.75, 25% **aqueous** NH3

4.385, antifoaming agent 0.365%.

IC ICM C08J003-20  
ICS C08J003-28; C08K003-22; C08F002-28; C08F002-30; C08F002-50

CC 42-12 (**Coatings**, Inks, and Related Products)  
Section cross-reference(s): 38, 55, 56

ST **water** thinned printing ink hydrophobic substrate; photocurable  
**water** thinned printing ink; polystyrene **water** thinned  
printing ink; styrene copolymer **water** thinned printing ink;  
**acrylic** copolymer **water** thinned printing ink;  
**epoxy acrylate water** thinned printing ink;  
polycarbonate **film water** thinned printing ink; plastic  
substrate **water** thinned printing ink; metal **water**  
thinned printing ink; **waterproof** printing ink hydrophobic  
substrate

IT Rubber, butadiene-styrene, uses  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material  
use); PREP (Preparation); USES (Uses)  
(SBR 1502, trimethylolpropane **triacylate-crosslinked**  
; **water**-thinned photocurable printing inks containing hydrophobic  
and hydrophilic polymers and having good **water** resistance on  
hydrophobic metal and plastic substrates)

IT Metals, miscellaneous  
Plastics  
Polycarbonates, miscellaneous  
RL: MSC (Miscellaneous)  
(**water**-thinned photocurable printing inks containing hydrophobic  
and hydrophilic polymers and having good **water** resistance on  
hydrophobic metal and plastic substrates)

IT **Polyesters**, uses  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material  
use); PREP (Preparation); USES (Uses)  
(**acrylic, water**-thinned photocurable printing inks  
containing hydrophobic and hydrophilic polymers and having good  
**water** resistance on hydrophobic metal and plastic substrates)

IT **Urethane** polymers, uses  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material  
use); PREP (Preparation); USES (Uses)  
(**acrylic-polyether-, water**-thinned photocurable  
printing inks containing hydrophobic and hydrophilic polymers and having  
good **water** resistance on hydrophobic metal and plastic  
substrates)

IT Polyethers, uses  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material  
use); PREP (Preparation); USES (Uses)  
(**acrylic-polyurethane-, water**-thinned  
photocurable printing inks containing hydrophobic and hydrophilic polymers  
and having good **water** resistance on hydrophobic metal and  
plastic substrates)

IT Petroleum resins  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material  
use); PREP (Preparation); USES (Uses)  
(aliphatic, Escorez 9271, trimethylolpropane **triacylate-**  
**crosslinked; water**-thinned photocurable printing inks  
containing hydrophobic and hydrophilic polymers and having good  
**water** resistance on hydrophobic metal and plastic substrates)

IT Inks  
(printing, **water**-thinned, **water**-thinned  
photocurable printing inks containing hydrophobic and hydrophilic polymers

and having good **water** resistance on hydrophobic metal and plastic substrates)

IT 9003-55-8P  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (rubber, SBR 1502, trimethylolpropane **triacylate-crosslinked; water**-thinned photocurable printing inks containing hydrophobic and hydrophilic polymers and having good **water** resistance on hydrophobic metal and plastic substrates)

IT 172972-20-2P 172972-21-3P, Butadiene-trimethylolpropane **triacylate** copolymer 172972-22-4P 172972-23-5P 172972-24-6P **172972-25-7P** 172972-26-8P 172972-27-9P 172972-28-0P  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (**water**-thinned photocurable printing inks containing hydrophobic and hydrophilic polymers and having good **water** resistance on hydrophobic metal and plastic substrates)

IT 7429-90-5, Aluminum, miscellaneous 9002-88-4, Polyethylene 9003-07-0, Polypropylene  
 RL: MSC (Miscellaneous)  
 (**water**-thinned photocurable printing inks containing hydrophobic and hydrophilic polymers and having good **water** resistance on hydrophobic metal and plastic substrates)

IT 25085-34-1, **Acrylic** acid-styrene copolymer 25585-77-7, Joncryl 678 52831-04-6, Joncryl 90 117347-69-0, Joncryl 537 133108-64-2, Joncryl 8050 151616-03-4, Joncryl 8051 173358-78-6, Rhoplex E 1941 173358-81-1, Elotex Print 2030 173358-92-4, Joncryl 8004 173359-06-3, Joncryl SCX 2630  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (**water**-thinned photocurable printing inks containing hydrophobic and hydrophilic polymers and having good **water** resistance on hydrophobic metal and plastic substrates)

IT **172972-25-7P**  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (**water**-thinned photocurable printing inks containing hydrophobic and hydrophilic polymers and having good **water** resistance on hydrophobic metal and plastic substrates)

RN 172972-25-7 HCAPLUS  
 CN 2-Propenoic acid, 2-ethyl-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl ester, polymer with Ebecryl 230 and 2-ethylhexyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

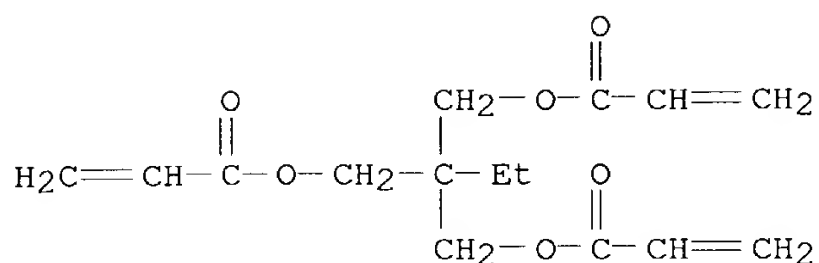
CRN 74092-50-5  
 CMF Unspecified  
 CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 2

CRN 15625-89-5  
 CMF C15 H20 O6

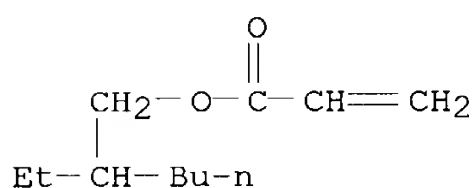




CM 3

CRN 103-11-7

CMF C11 H20 O2



L56 ANSWER 24 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1995:647944 HCAPLUS

DN 123:86077

TI **Water**-borne compositions comprising half esters of anhydride polymers **crosslinked** by **epoxies** and their application in a multipackage system

IN Barsotti, Robert J.; Harper, Lee R.; Lock, Michele Renee

PA du Pont de Nemours, E. I., and Co., USA

SO PCT Int. Appl., 34 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9411122	A1	19940526	WO 1993-US10791	19931116
	W: CA				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	US 5367004	A	19941122	US 1992-977864	19921117
	US 5376704	A	19941227	US 1992-977863	19921117
	CA 2147830	AA	19940526	CA 1993-2147830	19931116
	EP 670756	A1	19950913	EP 1994-901343	19931116
	R: BE, DE, FR, GB				
PRAI	US 1992-977863		19921117		
	US 1992-977864		19921117		
	WO 1993-US10791		19931116		

AB An **aqueous coating** composition useful for maintenance **coatings** for architectural structures or for a finish or refinish for automobiles and trucks consists of a binder and an **aqueous** carrier. The **film**-forming binder comprises a neutralized half-ester product of an **acrylic** polymer having at least two reactive anhydride groups and an **epoxy**-containing, optionally silane-containing, **crosslinker**, kept sep. until use. For example, a

binder was prepared by reaction of MeOH with a Bu **acrylate**-isobornyl **methacrylate**-maleic anhydride-styrene copolymer, and a **crosslinking** agent was prepared by copolymering Bu **methacrylate** 3, 2-ethylhexyl **acrylate** 3, glycidyl **methacrylate** 10, ( $\gamma$ -**methacryloyloxypropyl**)trimethoxysilane 52, Me **methacrylate** 12, and styrene 20 parts. The compns. are characterized by improved environmental resistance and excellent clarity and appearance, particularly for clearcoat applications.

IC ICM B05D001-38  
ICS C08G059-42; C08L031-06; C08L033-08; C08L033-10; C08L043-00; C08L063-00

CC 42-7 (**Coatings**, Inks, and Related Products)

ST **epoxy crosslinker acrylic coating**;  
**epoxide** silane copolymer **crosslinking** agent;  
multipackage automotive clearcoat compn

IT **Urethane** polymers, uses  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(**polyester**-, block, **water**-borne **coating** compns. comprising half esters of anhydride polymers **crosslinked by epoxides**)

IT **Coating** materials  
(transparent, automotive; **water**-borne **coating** compns. comprising half esters of anhydride polymers **crosslinked by epoxides**)

IT 163104-08-3P  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(**crosslinking** agent; **water**-borne **coating** compns. comprising half esters of anhydride polymers **crosslinked by epoxides**)

IT 164455-29-2P  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(**water**-borne **coating** compns. comprising half esters of anhydride polymers **crosslinked by epoxides**)

IT 58048-89-8P, Butyl **acrylate**-butyl **methacrylate**-**methacrylic** acid-styrene copolymer 164326-97-0P  
165036-20-4P 165304-75-6P 165304-76-7P  
165306-68-3P 165523-68-2P  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(**water**-borne **coating** compns. comprising half esters of anhydride polymers **crosslinked by epoxides**)

IT 119380-67-5, NeoCryl A 6015 163151-16-4, NeoRez XR 9679 163649-41-0, NeoRez XR 9699  
RL: TEM (Technical or engineered material use); USES (Uses)  
(**water**-borne **coating** compns. comprising half esters of anhydride polymers **crosslinked by epoxides**)

IT 164326-97-0P 165036-20-4P 165304-75-6P  
165304-76-7P  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(**water**-borne **coating** compns. comprising half esters of anhydride polymers **crosslinked by epoxides**)

RN 164326-97-0 HCAPLUS

CN Hexanedioic acid, polymer with 1,3-butanediol, 1,6-diisocyanatotrimethylhexane, 2-ethyl-2-(hydroxymethyl)-1,3-propanediol, 1,6-hexanediol and Tone FCP 310, block (9CI) (CA INDEX NAME)

CM 1

CRN 163515-76-2  
CMF Unspecified  
CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 2

CRN 28679-16-5  
CMF C11 H18 N2 O2  
CCI IDS

OCN- (CH<sub>2</sub>)<sub>6</sub>-NCO

3 ( D1-Me )

CM 3

CRN 629-11-8  
CMF C6 H14 O2

HO- (CH<sub>2</sub>)<sub>6</sub>-OH

CM 4

CRN 124-04-9  
CMF C6 H10 O4

HO<sub>2</sub>C- (CH<sub>2</sub>)<sub>4</sub>-CO<sub>2</sub>H

CM 5

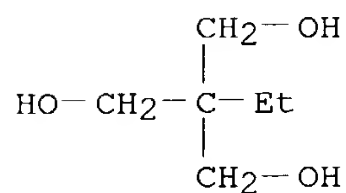
CRN 107-88-0  
CMF C4 H10 O2

OH  
|  
Me-CH-CH<sub>2</sub>-CH<sub>2</sub>-OH

CM 6

CRN 77-99-6

CMF C6 H14 O3



RN 165036-20-4 HCAPLUS

CN D-Glucitol, tetrakis-O-(oxiranylmethyl)-, polymer with bis(oxiranylmethyl) 1,2-cyclohexanedicarboxylate, butyl 2-propenoate, ethenylbenzene, 2,5-furandione and exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-methyl-2-propenoate, methyl ester (9CI) (CA INDEX NAME)

CM 1

CRN 67-56-1

CMF C H4 O

H<sub>3</sub>C---OH

CM 2

CRN 173010-77-0

CMF (C18 H30 O10 . C14 H22 O2 . C14 H20 O6 . C8 H8 . C7 H12 O2 . C4 H2 O3) x

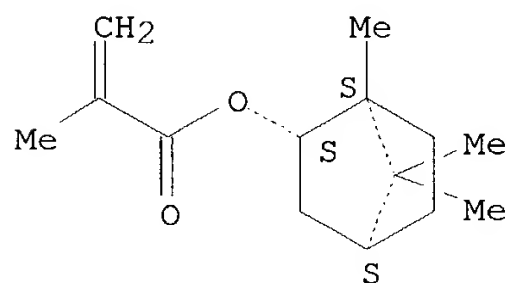
CCI PMS

CM 3

CRN 7534-94-3

CMF C14 H22 O2

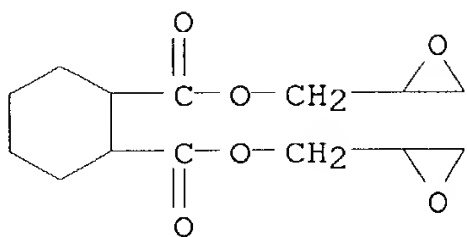
Relative stereochemistry.



CM 4

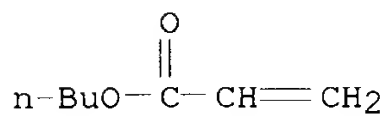
CRN 5493-45-8

CMF C14 H20 O6



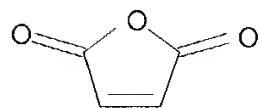
CM 5

CRN 141-32-2  
CMF C7 H12 O2



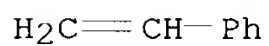
CM 6

CRN 108-31-6  
CMF C4 H2 O3



CM 7

CRN 100-42-5  
CMF C8 H8

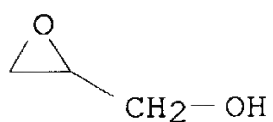


CM 8

CRN 64055-71-6  
CMF C18 H30 O10  
CCI IDS

CM 9

CRN 556-52-5  
CMF C3 H6 O2

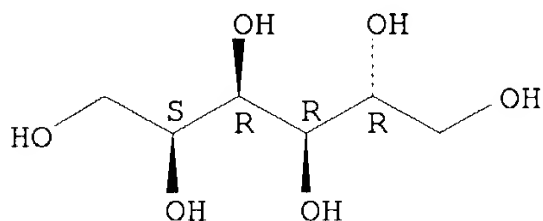


CM 10

CRN 50-70-4

CMF C6 H14 O6

Absolute stereochemistry.



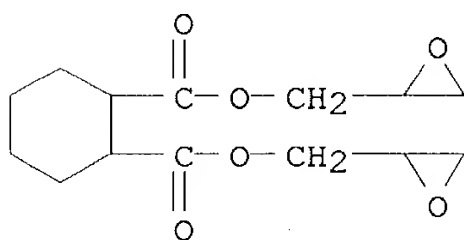
RN 165304-75-6 HCAPLUS

CN 1,2-Cyclohexanedicarboxylic acid, bis(oxiranylmethyl) ester, polymer with butyl 2-propenoate polymer with ethenylbenzene, 2,5-furandione and exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-methyl-2-propenoate methyl ester (9CI) (CA INDEX NAME)

CM 1

CRN 5493-45-8

CMF C14 H20 O6



CM 2

CRN 164455-29-2

CMF (C14 H22 O2 . C8 H8 . C7 H12 O2 . C4 H2 O3)x . x C H4 O

CM 3

CRN 67-56-1

CMF C H4 O

H<sub>3</sub>C-OH

CM 4

CRN 164326-96-9

CMF (C14 H22 O2 . C8 H8 . C7 H12 O2 . C4 H2 O3)x

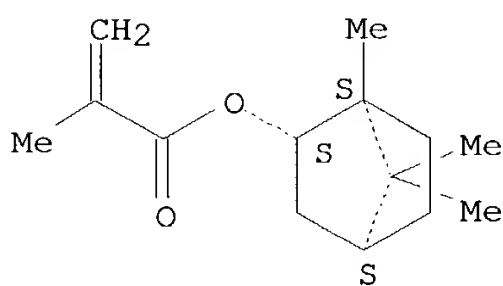
CCI PMS

CM 5

CRN 7534-94-3

CMF C14 H22 O2

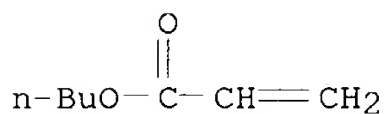
Relative stereochemistry.



CM 6

CRN 141-32-2

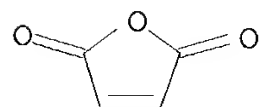
CMF C7 H12 O2



CM 7

CRN 108-31-6

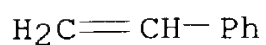
CMF C4 H2 O3



CM 8

CRN 100-42-5

CMF C8 H8



RN 165304-76-7 HCAPLUS

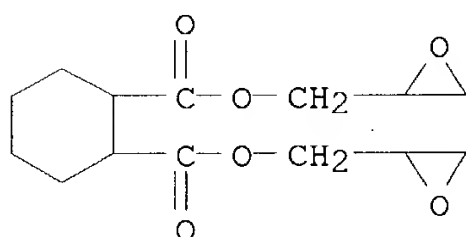
CN 1,2-Cyclohexanedicarboxylic acid, bis(oxiranylmethyl) ester, polymer with

butyl 2-methyl-2-propenoate, butyl 2-propenoate polymer with  
ethenylbenzene, 2,5-furandione and exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-  
yl 2-methyl-2-propenoate methyl ester, ethenylbenzene, 2-ethylhexyl  
2-propenoate, methyl 2-methyl-2-propenoate, oxiranylmethyl  
2-methyl-2-propenoate and 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate  
(9CI) (CA INDEX NAME)

CM 1

CRN 5493-45-8

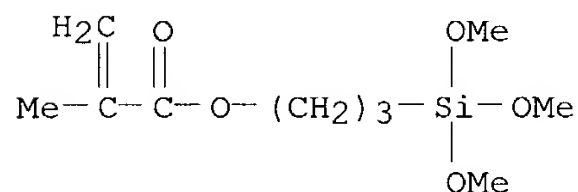
CMF C14 H20 O6



CM 2

CRN 2530-85-0

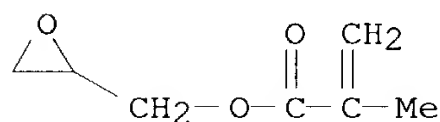
CMF C10 H20 O5 Si



CM 3

CRN 106-91-2

CMF C7 H10 O3

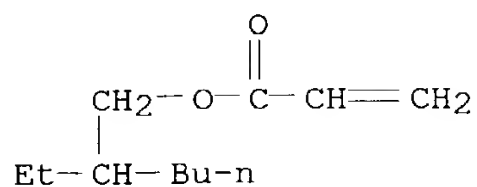


CM 4

CRN 103-11-7

CMF C11 H20 O2

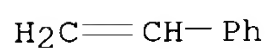




CM 5

CRN 100-42-5

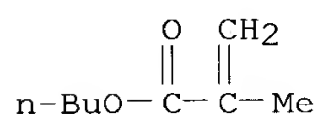
CMF C8 H8



CM 6

CRN 97-88-1

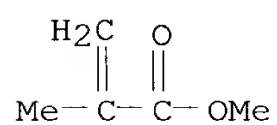
CMF C8 H14 O2



CM 7

CRN 80-62-6

CMF C5 H8 O2



CM 8

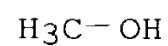
CRN 164455-29-2

CMF (C14 H22 O2 . C8 H8 . C7 H12 O2 . C4 H2 O3)x . x C H4 O

CM 9

CRN 67-56-1

CMF C H4 O



CM 10

CRN 164326-96-9

CMF (C14 H22 O2 . C8 H8 . C7 H12 O2 . C4 H2 O3) x

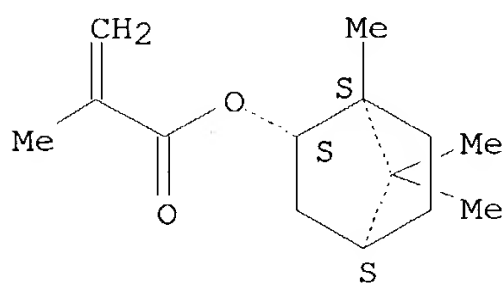
CCI PMS

CM 11

CRN 7534-94-3

CMF C14 H22 O2

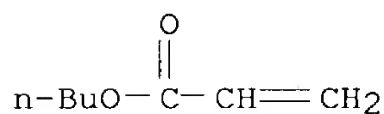
Relative stereochemistry.



CM 12

CRN 141-32-2

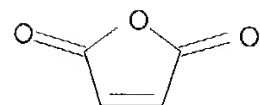
CMF C7 H12 O2



CM 13

CRN 108-31-6

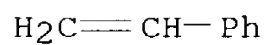
CMF C4 H2 O3



CM 14

CRN 100-42-5

CMF C8 H8



AN 1995:312321 HCAPLUS  
 DN 122:83847  
 TI Multilayered **coating** process with bilayered electrodeposition compositions  
 IN Nakatani, Eisaku; Hirata, Yasuyuki; Kume, Masafumi  
 PA Kansai Paint Co Ltd, Japan  
 SO Jpn. Kokai Tokkyo Koho, 18 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 06173089	A2	19940621	JP 1992-351643	19921208
PRAI	JP 1992-351643		19921208		

AB **Coating** process, forming products with good edge anticorrosion, involves **coating** with 5-50% gelled microparticle-containing cationic electrodepositing compns., wet-on-wet **coating** with cationic electrodepositing compns. containing 60-98:2-40 epoxy resins with surface tension (Ts) of 40-60 dyne/cm and nonionic resins with Ts of 25-45 dyne/cm, baking, covering with **aqueous** colorant- and/or metallic pigment-containing compns., wet-on-wet covering with powdered clear compns., and

baking. A polyamide-modified epoxy resin composition containing 0.15- $\mu$ m bisphenol A-diethanolamine-KBE 903-Epon 828EL reaction product acetate salt gel particles and a composition containing HOAc, blocked MDI, blocked isophorone diisocyanate, polyoxypropylene, and 30% Bu methacrylate-2-hydroxyethyl methacrylate-styrene-FM 3X block copolymer and 70% Araldite 6071-Araldite GY 2600-Placel 205-diethnaolamine-monoethanolamine reaction product were used as the base and top electrodepositing **coating**, resp. An **aqueous** base composition containing Al paste, Cymel 303, Bu acrylate (I)-2-ethylhexyl acrylate (II)-2-hydroxyethyl acrylate-methacrylic acid-Me methacrylate (III)-styrene (IV) block copolymer, and acrylic acid-2-hydroxyethyl methacrylate-I-III-IV copolymer and a powdered composition containing glycidyl methacrylate-II-III-IV copolymer were

used as the metallic base and clear top **coating**, resp.

IC ICM C25D013-00  
 ICS B05D001-36; B05D005-06; B05D007-14

CC 42-10 (**Coatings**, Inks, and Related Products)

ST bilayered epoxy electrodeposition **coating**; anticorrosion edge multilayer **coating**

IT Acrylic polymers, uses  
 Epoxy resins, uses

RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)

(wet-on-wet of modified epoxy resin electrodepositing compns. and wet-on-wet of acrylic base and clear top compns.)

IT Silsesquioxanes

RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)

(Me **Ph**, cationic epoxy resin electrodepositing **coatings** containing; wet-on-wet of modified epoxy resin electrodepositing compns. and wet-on-wet of acrylic base and clear top compns.)

IT **Coating** materials

(multilayer, edge anticorrosion; wet-on-wet of modified epoxy resin electrodepositing compns. and wet-on-wet of acrylic base and clear top

compns.)

IT 160455-61-8  
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
 (colored or metallic base coats; wet-on-wet of modified epoxy resin electrodepositing compns. and wet-on-wet of acrylic base and clear top compns.)

IT 80-05-7D, reaction products with aminoalkoxysilanes and epoxy resins and diethanolamine, acetate salts 111-42-2D, Diethanolamine, reaction products with aminoalkoxysilanes and bisphenol A and epoxy resins, acetate salts 919-30-2D, reaction products with epoxy resins and bisphenol A and diethanolamine, acetate salts 3069-25-8D, X 12-636, reaction products with epoxy resins and bisphenol A and diethanolamine, acetate salts 25085-99-8D, Epon 828EL, reaction products with aminoalkoxysilanes and bisphenol A and diethanolamine, acetate salt 127959-97-1 160570-09-2  
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
 (gelled microparticles, in base electrodepositing **coatings**; wet-on-wet of modified epoxy resin electrodepositing compns. and wet-on-wet of acrylic base and clear top compns.)

IT 58111-07-2, 2-Ethylhexyl acrylate-glycidyl methacrylate-methyl methacrylate-styrene copolymer  
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
 (powdered top coats; wet-on-wet of modified epoxy resin electrodepositing compns. and wet-on-wet of acrylic base and clear top compns.)

IT **160455-63-0 160455-65-2 160455-67-4**  
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
 (top electrodepositing **coating**; wet-on-wet of modified epoxy resin electrodepositing compns. and wet-on-wet of acrylic base and clear top compns.)

IT **160455-63-0 160455-65-2 160455-67-4**  
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
 (top electrodepositing **coating**; wet-on-wet of modified epoxy resin electrodepositing compns. and wet-on-wet of acrylic base and clear top compns.)

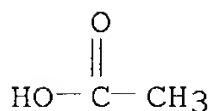
RN 160455-63-0 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, butyl ester, polymer with 2-aminoethanol, Araldite GY 2600, (chloromethyl)oxirane, ethenylbenzene, 2-hydroxyethyl 2-methyl-2-propenoate, 2,2'-iminobis[ethanol], 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane, 1,1'-methylenebis[4-isocyanatobenzene], 4,4'-(1-methylethylidene)bis[phenol], methyloxirane,  $\alpha$ -[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl]- $\omega$ -hydroxypoly[oxy(1-oxo-1,6-hexanediyl)] and Placel 205, acetate (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 64-19-7

CMF C2 H4 O2



CM 2

CRN 160455-62-9

CMF (C15 H16 O2 . C15 H10 N2 O2 . C12 H18 N2 O2 . C8 H14 O2 . C8 H8 . C6 H10 O3 . (C6 H10 O2)n C6 H10 O3 . C4 H11 N O2 . C3 H6 O . C3 H5 Cl O . C2 H7 N O . Unspecified . Unspecified)x

CCI PMS

CM 3

CRN 109489-28-3

CMF Unspecified

CCI MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 4

CRN 94188-96-2

CMF Unspecified

CCI PMS, MAN

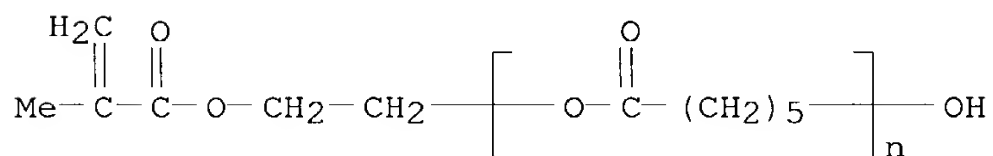
\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 5

CRN 81984-60-3

CMF (C6 H10 O2)n C6 H10 O3

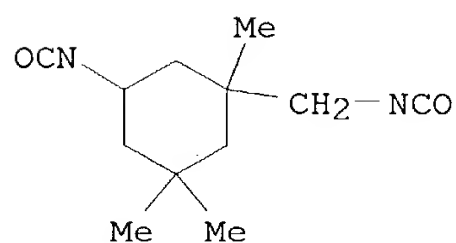
CCI PMS



CM 6

CRN 4098-71-9

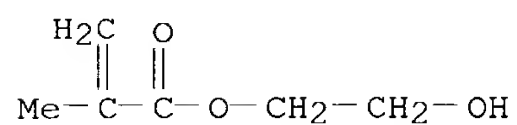
CMF C12 H18 N2 O2



CM 7

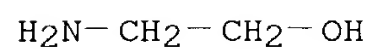
CRN 868-77-9

CMF C6 H10 O3



CM 8

CRN 141-43-5  
CMF C2 H7 N O



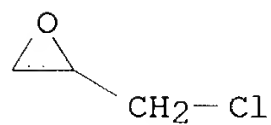
CM 9

CRN 111-42-2  
CMF C4 H11 N O2



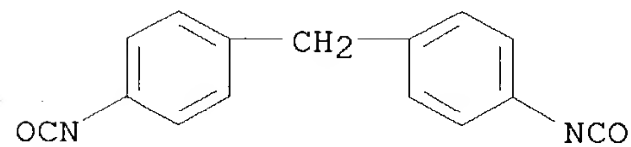
CM 10

CRN 106-89-8  
CMF C3 H5 Cl O



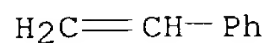
CM 11

CRN 101-68-8  
CMF C15 H10 N2 O2



CM 12

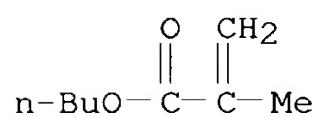
CRN 100-42-5  
CMF C8 H8



CM 13

CRN 97-88-1

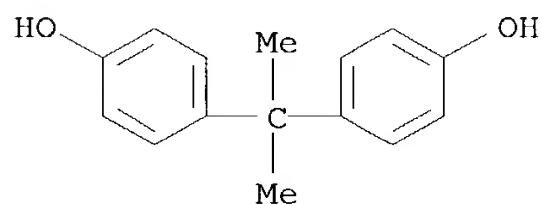
CMF C8 H14 O2



CM 14

CRN 80-05-7

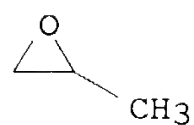
CMF C15 H16 O2



CM 15

CRN 75-56-9

CMF C3 H6 O



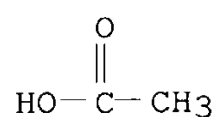
RN 160455-65-2 HCAPLUS

CN 2-Propenoic acid, 2-hydroxyethyl ester, polymer with 2-aminoethanol, Araldite GY 2600, (chloromethyl)oxirane, ethenylbenzene, 2,2'-iminobis[ethanol], 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane, 1,1'-methylenebis[4-isocyanatobenzene], 4,4'-(1-methylethylidene)bis[phenol], methyloxirane,  $\alpha$ -[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl]- $\omega$ -hydroxypoly[oxy(1-oxo-1,6-hexanediyl)] and Placel 205, acetate (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 64-19-7

CMF C2 H4 O2



CM 2

CRN 160455-64-1

CMF (C15 H16 O2 . C15 H10 N2 O2 . C12 H18 N2 O2 . C8 H8 . (C6 H10 O2)n C6 H10 O3 . C5 H8 O3 . C4 H11 N O2 . C3 H6 O . C3 H5 Cl O . C2 H7 N O . Unspecified . Unspecified)x

CCI PMS

CM 3

CRN 109489-28-3

CMF Unspecified

CCI MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 4

CRN 94188-96-2

CMF Unspecified

CCI PMS, MAN

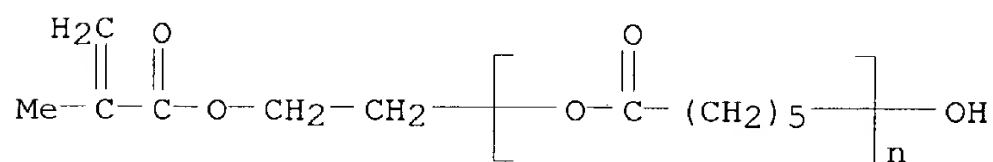
\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 5

CRN 81984-60-3

CMF (C6 H10 O2)n C6 H10 O3

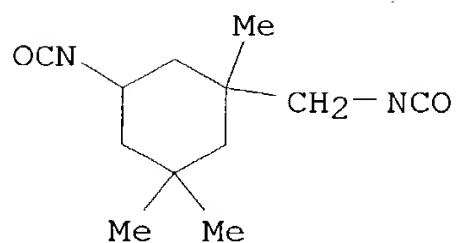
CCI PMS



CM 6

CRN 4098-71-9

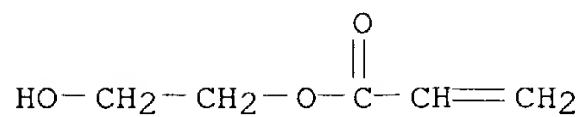
CMF C12 H18 N2 O2





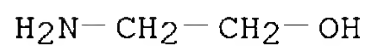
CM 7

CRN 818-61-1  
CMF C5 H8 O3



CM 8

CRN 141-43-5  
CMF C2 H7 N O



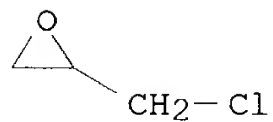
CM 9

CRN 111-42-2  
CMF C4 H11 N O2



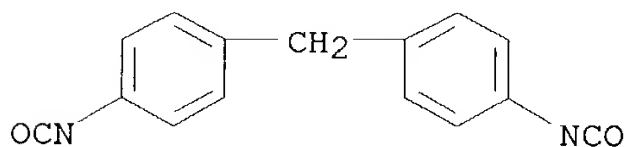
CM 10

CRN 106-89-8  
CMF C3 H5 Cl O



CM 11

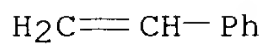
CRN 101-68-8  
CMF C15 H10 N2 O2



CM 12

CRN 100-42-5

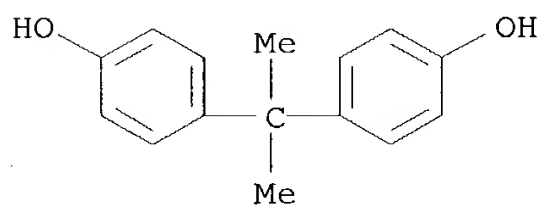
CMF C8 H8



CM 13

CRN 80-05-7

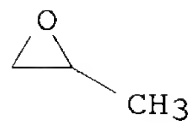
CMF C15 H16 O2



CM 14

CRN 75-56-9

CMF C3 H6 O



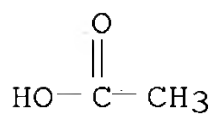
RN 160455-67-4 HCAPLUS

CN Benzoic acid, polymer with 2-aminoethanol, Araldite GY 2600, (chloromethyl)oxirane, 2,2'-iminobis[ethanol], 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane, 1,1'-methylenebis[4-isocyanatobenzene], 4,4'-(1-methylethylidene)bis[phenol], 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis[oxirane], methyloxirane and Placel 205, acetate (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 64-19-7

CMF C2 H4 O2



CM 2

CRN 160455-66-3

CMF (C21 H24 O4 . C15 H16 O2 . C15 H10 N2 O2 . C12 H18 N2 O2 . C7 H6 O2 .  
C4 H11 N O2 . C3 H6 O . C3 H5 Cl O . C2 H7 N O . Unspecified .  
Unspecified)x

CCI PMS

CM 3

CRN 109489-28-3

CMF Unspecified

CCI MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 4

CRN 94188-96-2

CMF Unspecified

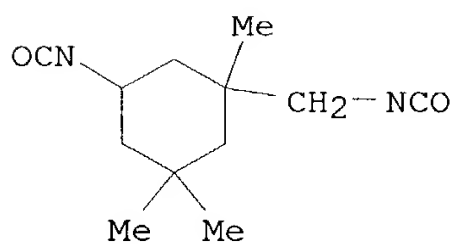
CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 5

CRN 4098-71-9

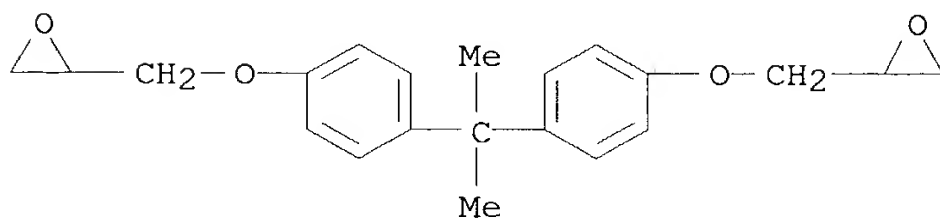
CMF C12 H18 N2 O2



CM 6

CRN 1675-54-3

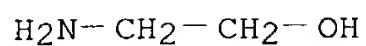
CMF C21 H24 O4



CM 7

CRN 141-43-5

CMF C2 H7 N O



CM 8

CRN 111-42-2

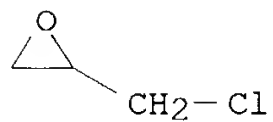
CMF C4 H11 N O2



CM 9

CRN 106-89-8

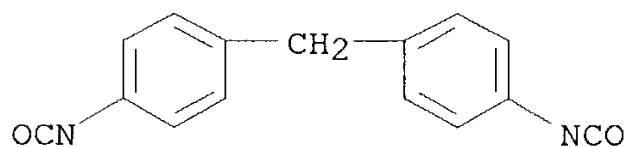
CMF C3 H5 Cl O



CM 10

CRN 101-68-8

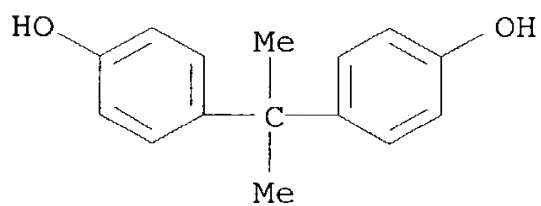
CMF C15 H10 N2 O2



CM 11

CRN 80-05-7

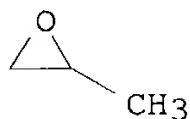
CMF C15 H16 O2



CM 12

CRN 75-56-9

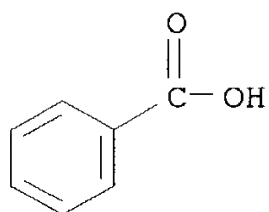
CMF C3 H6 O



CM 13

CRN 65-85-0

CMF C7 H6 O2



L56 ANSWER 26 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1994:301279 HCAPLUS

DN 120:301279

TI **Aqueous coating** materials containing block acrylic polyurethanes

IN Iwamura, Goro; Azuma, Ichiro; Komazaki, Shigeru; Kinoshita, Koji

PA Dainippon Ink & Chemicals, Japan

SO Jpn. Kokai Tokkyo Koho, 18 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	JP 06017000	A2	19940125	JP 1993-69945	19930329
	JP 3243876	B2	20020107		
PRAI	JP 1992-73962	A1	19920330		

AB Vinyl monomers are polymerized with diazo group-containing polyurethanes and dissolved or dispersed in **aqueous** media to prepare **coating** materials. Thus, dipropylene glycol (236)-2,2-dimethylolpropionic acid (143)-HMDI (551)-2,2'-azobis[2-(hydroxymethyl)propionitrile] (46)-diethylene glycol (24) copolymer was prepared, polymerized (100 parts, 40% nonvolatiles) with Me methacrylate 22.9, Bu acrylate 27.1, 2-hydroxyethyl methacrylate 10 parts in MEK and butanol, distilled in vacuo to remove solvents, mixed with Et<sub>3</sub>N and **H<sub>2</sub>O** to 29.1% nonvolatiles, and mixed with a thickener solution, N-methylmorpholin, an Al paste, and hexamethoxymelamine to prepare a base coat.

IC ICM C09D175-04

ICS C09D175-04; C09D151-08

ICA C08F283-00

CC 42-10 (**Coatings**, Inks, and Related Products)

ST block acrylic polyurethane **coating**; aluminum paste base coat

IT Pigments

(aluminum paste, for **coatings** containing block acrylic polyurethanes)

IT **Coating** materials  
(block acrylic polyurethanes, for metallic bases)

IT Vinyl compounds, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(block polymerization of, with diazo group-containing polyurethanes)

IT Urethane polymers, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(diazo group-containing, block polymerization of, with vinyl monomers)

IT **Crosslinking** agents  
(hexamethoxymelamine and polyisocyanates, for block acrylic polyurethanes, for **coatings**)

IT Azo compounds  
RL: USES (Uses)  
(bis-, polyurethane derivs., block polymers with vinyl monomers, for **coatings**)

IT Polymerization  
(block, of vinyl monomers and diazo group-containing polyurethanes)

IT 154667-76-2 155072-26-7 155115-33-6  
155157-07-6 155159-16-3 155159-18-5  
155159-20-9 155279-64-4  
RL: TEM (Technical or engineered material use); USES (Uses)  
(**coatings**, containing **crosslinking** agents, for metallic bases)

IT 96-29-7D, Ethyl methyl ketoxime, -blocked polyisocyanates, reaction products with hydroxymethylmethoxymethylpropionic acid 133757-73-0D, Burnock DN 980S, blocked, reaction products with hydroxymethylmethoxymethylpropionic acid 148597-50-6D, reaction products with blocked polyisocyanates 155157-09-8 155319-99-6  
RL: MOA (Modifier or additive use); USES (Uses)  
(**crosslinking** agents, for block acrylic polyurethanes, for **coatings**)

IT 7429-90-5, Aluminum, uses  
RL: USES (Uses)  
(pigments, for **coatings** containing block acrylic polyurethanes)

IT 154667-76-2 155072-26-7 155115-33-6  
155157-07-6 155159-16-3 155159-18-5  
155159-20-9 155279-64-4  
RL: TEM (Technical or engineered material use); USES (Uses)  
(**coatings**, containing **crosslinking** agents, for metallic bases)

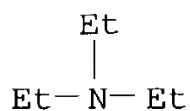
RN 154667-76-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with 2,2'-azobis[3-hydroxy-2-methylpropanenitrile], butyl 2-propenoate, 1,6-diisocyanatohexane, 3-hydroxy-2-(hydroxymethyl)-2-methylpropanoic acid, methyl 2-methyl-2-propenoate 2,2'-oxybis[ethanol] and oxybis[propanol], block, compd. with N,N-diethylethanamine (9CI) (CA INDEX NAME)

CM 1

CRN 121-44-8

CMF C6 H15 N



CM 2

CRN 154667-75-1

CMF (C8 H12 N4 O2 . C8 H12 N2 O2 . C7 H12 O2 . C6 H14 O3 . C6 H10 O3 . C5 H10 O4 . C5 H8 O2 . C4 H10 O3)x

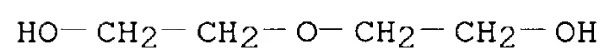
CCI PMS

CM 3

CRN 25265-71-8

CMF C6 H14 O3

CCI IDS

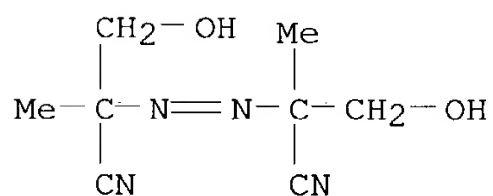


2 ( D1-Me )

CM 4

CRN 19706-80-0

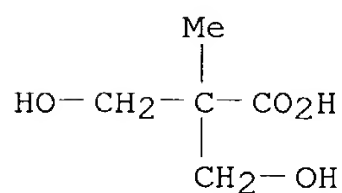
CMF C8 H12 N4 O2



CM 5

CRN 4767-03-7

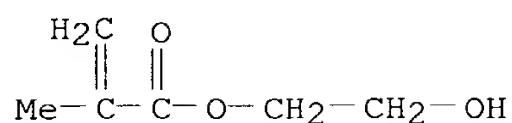
CMF C5 H10 O4



CM 6

CRN 868-77-9

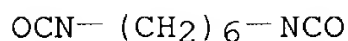
CMF C6 H10 O3



CM 7

CRN 822-06-0

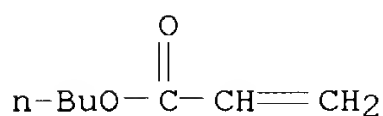
CMF C8 H12 N2 O2



CM 8

CRN 141-32-2

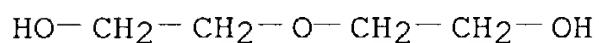
CMF C7 H12 O2



CM 9

CRN 111-46-6

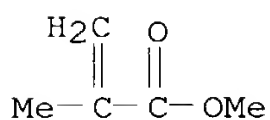
CMF C4 H10 O3



CM 10

CRN 80-62-6

CMF C5 H8 O2



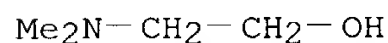
RN 155072-26-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-ethylhexyl ester, polymer with 2,2'-azobis[3-hydroxy-2-methylpropanenitrile], butyl 2-propenoate, Burnock DN 901S, 1,6-diisocyanatohexane, 2,2-dimethyl-1,3-propanediol, ethenylbenzene, 3-hydroxy-2-(hydroxymethyl)-2-methylpropanoic acid, 2-hydroxyethyl 2-methyl-2-propenoate and 2-propenoic acid, block, compd. with 2-(dimethylamino)ethanol (9CI) (CA INDEX NAME)

CM 1



CRN 108-01-0  
CMF C4 H11 N O



CM 2

CRN 155072-25-6  
CMF (C12 H22 O2 . C8 H12 N4 O2 . C8 H12 N2 O2 . C8 H8 . C7 H12 O2 . C6 H10 O3 . C5 H12 O2 . C5 H10 O4 . C3 H4 O2 . Unspecified)x  
CCI PMS

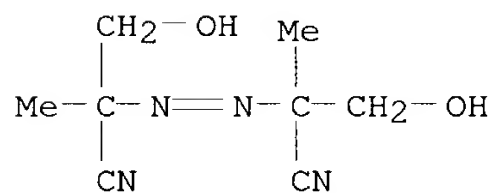
CM 3

CRN 142106-16-9  
CMF Unspecified  
CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

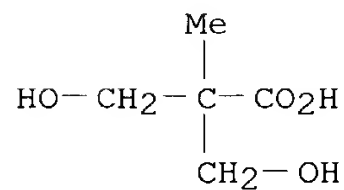
CM 4

CRN 19706-80-0  
CMF C8 H12 N4 O2



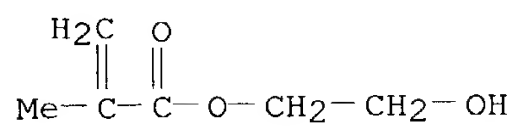
CM 5

CRN 4767-03-7  
CMF C5 H10 O4



CM 6

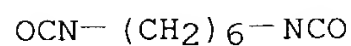
CRN 868-77-9  
CMF C6 H10 O3



CM 7

CRN 822-06-0

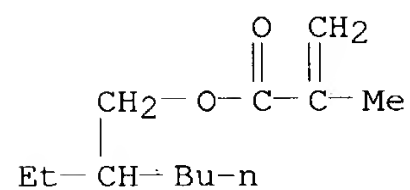
CMF C8 H12 N2 O2



CM 8

CRN 688-84-6

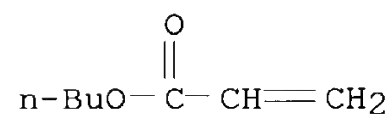
CMF C12 H22 O2



CM 9

CRN 141-32-2

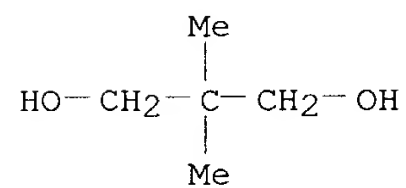
CMF C7 H12 O2



CM 10

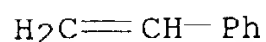
CRN 126-30-7

CMF C5 H12 O2



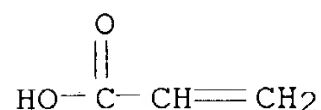
CM 11

CRN 100-42-5  
CMF C8 H8



CM 12

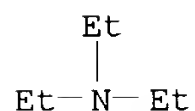
CRN 79-10-7  
CMF C3 H4 O2



RN 155115-33-6 HCAPLUS  
CN 1,4-Benzenedicarboxylic acid, polymer with 2,2'-azobis[N-(2-hydroxyethyl)-2-methylpropanamide], 1,6-diisocyanatohexane, 1,2-ethanediol, ethenylbenzene, ethyl 2-propenoate, 1,6-hexanediol, 2-methyl-2-propenoic acid and 1,2,3-propanetriol mono(dihydrogen phosphate), block, compd. with N,N-diethylethanamine (9CI) (CA INDEX NAME)

CM 1

CRN 121-44-8  
CMF C6 H15 N

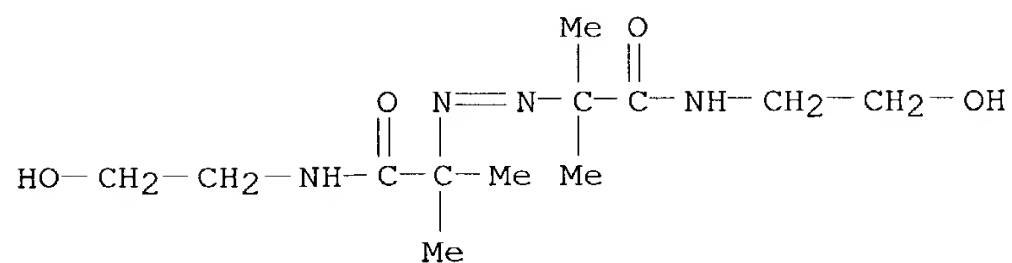


CM 2

CRN 155115-32-5  
CMF (C12 H24 N4 O4 . C8 H12 N2 O2 . C8 H8 . C8 H6 O4 . C6 H14 O2 . C5 H8 O2 . C4 H6 O2 . C3 H9 O6 P . C2 H6 O2)x  
CCI PMS

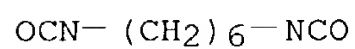
CM 3

CRN 61551-69-7  
CMF C12 H24 N4 O4



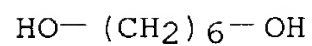
CM 4

CRN 822-06-0  
CMF C8 H12 N2 O2



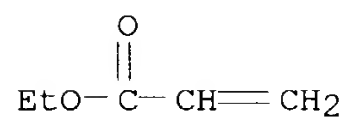
CM 5

CRN 629-11-8  
CMF C6 H14 O2



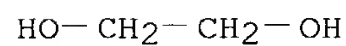
CM 6

CRN 140-88-5  
CMF C5 H8 O2



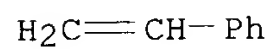
CM 7

CRN 107-21-1  
CMF C2 H6 O2



CM 8

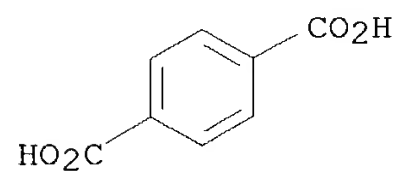
CRN 100-42-5  
CMF C8 H8



CM 9

CRN 100-21-0

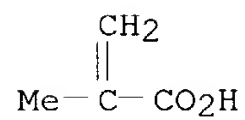
CMF C8 H6 O4



CM 10

CRN 79-41-4

CMF C4 H6 O2



CM 11

CRN 27082-31-1

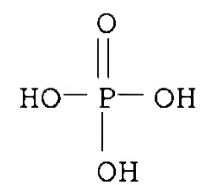
CMF C3 H9 O6 P

CCI IDS

CM 12

CRN 7664-38-2

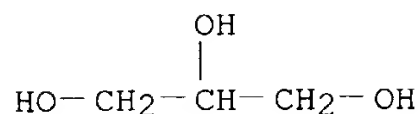
CMF H3 O4 P



CM 13

CRN 56-81-5

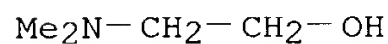
CMF C3 H8 O3



RN 155157-07-6 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl-, 2-ethylhexyl ester, polymer with azobis[(hydroxymethyl)propanenitrile], Burnock DN 901S, 1,6-diisocyanatohexane, 2,2-dimethyl-1,3-propanediol, ethenylbenzene, 3-hydroxy-2-(hydroxymethyl)-2-methylpropanoic acid and methyl 2-methyl-2-propenoate, block, compd. with 2-(dimethylamino)ethanol (9CI) (CA INDEX NAME)

CM 1

CRN 108-01-0  
 CMF C4 H11 N O



CM 2

CRN 155157-06-5  
 CMF (C12 H22 O2 . C8 H12 N4 O2 . C8 H12 N2 O2 . C8 H8 . C5 H12 O2 . C5 H10 O4 . C5 H8 O2 . Unspecified)x  
 CCI PMS

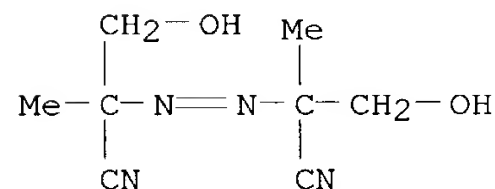
CM 3

CRN 142106-16-9  
 CMF Unspecified  
 CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

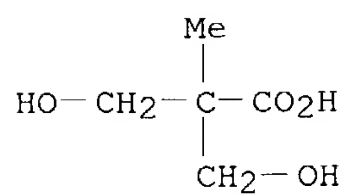
CM 4

CRN 19706-80-0  
 CMF C8 H12 N4 O2



CM 5

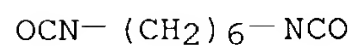
CRN 4767-03-7  
 CMF C5 H10 O4



CM 6

CRN 822-06-0

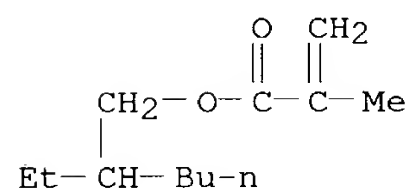
CMF C8 H12 N2 O2



CM 7

CRN 688-84-6

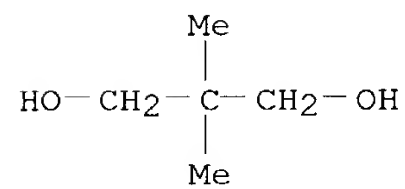
CMF C12 H22 O2



CM 8

CRN 126-30-7

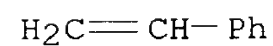
CMF C5 H12 O2



CM 9

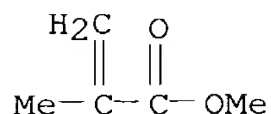
CRN 100-42-5

CMF C8 H8



CM 10

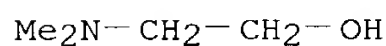
CRN 80-62-6  
CMF C5 H8 O2



RN 155159-16-3 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, polymer with 2,2'-azobis[3-hydroxy-2-methylpropanenitrile], bis(isocyanatomethyl)benzene, Burnock DN 955, 1,6-diisocyanatohexane, ethenylbenzene, 2-ethylhexyl 2-methyl-2-propenoate,  $\alpha$ -hydro- $\omega$ -hydroxypoly[oxy(methyl-1,2-ethanediyl)], 4-hydroxybutyl 2-propenoate and 3-hydroxy-2-(hydroxymethyl)-2-methylpropanoic acid, block, compd. with 2-(dimethylamino)ethanol (9CI)  
(CA INDEX NAME)

CM 1

CRN 108-01-0  
CMF C4 H11 N O



CM 2

CRN 155159-15-2  
CMF (C12 H22 O2 . C10 H8 N2 O2 . C8 H12 N4 O2 . C8 H12 N2 O2 . C8 H8 . C7 H12 O3 . C5 H10 O4 . C4 H6 O2 . (C3 H6 O)n H2 O . Unspecified)x  
CCI PMS

CM 3

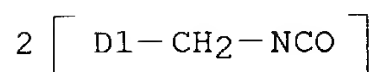
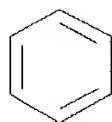
CRN 122302-78-7  
CMF Unspecified  
CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 4

CRN 25854-16-4  
CMF C10 H8 N2 O2  
CCI IDS



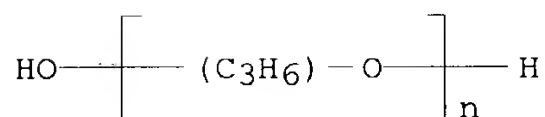


CM 5

CRN 25322-69-4

CMF (C3 H6 O)n H2 O

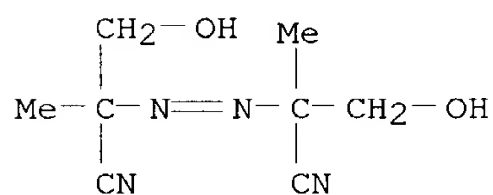
CCI IDS, PMS



CM 6

CRN 19706-80-0

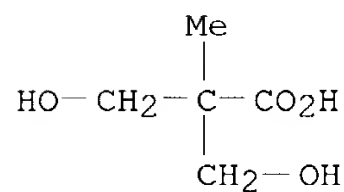
CMF C8 H12 N4 O2



CM 7

CRN 4767-03-7

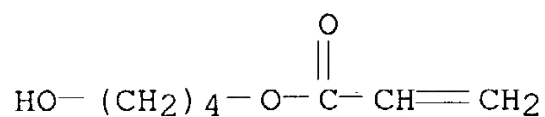
CMF C5 H10 O4



CM 8

CRN 2478-10-6

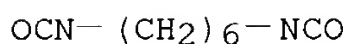
CMF C7 H12 O3



CM 9

CRN 822-06-0

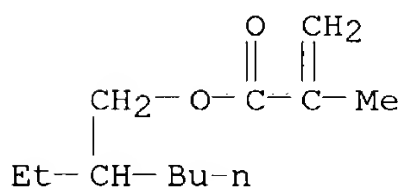
CMF C8 H12 N2 O2



CM 10

CRN 688-84-6

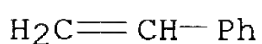
CMF C12 H22 O2



CM 11

CRN 100-42-5

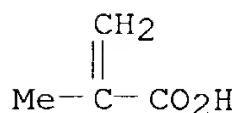
CMF C8 H8



CM 12

CRN 79-41-4

CMF C4 H6 O2



RN 155159-18-5 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with 2,2'-azobis[3-hydroxy-2-methylpropanenitrile], bis(isocyanatomethyl)benzene, butyl 2-propenoate, (chloromethyl)oxirane, 1,6-diisocyanatohexane, α-hydro-ω-hydroxypoly[oxy(methyl-1,2-ethanediyl)], 2-hydroxyethyl 2-methyl-2-propenoate, 3-hydroxy-2-(hydroxymethyl)-2-methylpropanoic acid,

4,4'-(1-methylethylidene)bis[phenol] and methyl 2-methyl-2-propenoate,  
block, compd. with 2-(dimethylamino)ethanol (9CI) (CA INDEX NAME)

CM 1

CRN 108-01-0

CMF C4 H11 N O

Me<sub>2</sub>N-CH<sub>2</sub>-CH<sub>2</sub>-OH

CM 2

CRN 155159-17-4

CMF (C15 H16 O2 . C10 H8 N2 O2 . C8 H12 N4 O2 . C8 H12 N2 O2 . C7 H12 O2  
. C6 H10 O3 . C5 H10 O4 . C5 H8 O2 . C4 H6 O2 . (C3 H6 O)<sub>n</sub> H2 O . C3  
H5 Cl O)<sub>x</sub>

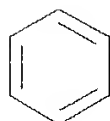
CCI PMS

CM 3

CRN 25854-16-4

CMF C10 H8 N2 O2

CCI IDS



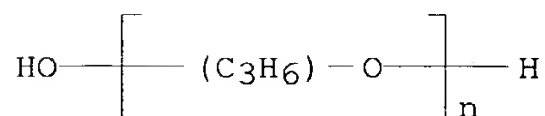
2 [ D1-CH<sub>2</sub>-NCO ]

CM 4

CRN 25322-69-4

CMF (C3 H6 O)<sub>n</sub> H2 O

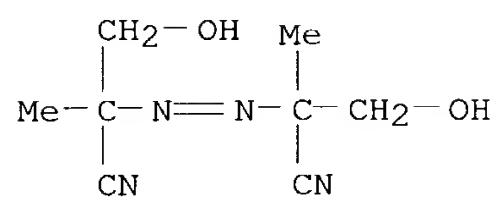
CCI IDS, PMS



CM 5

CRN 19706-80-0

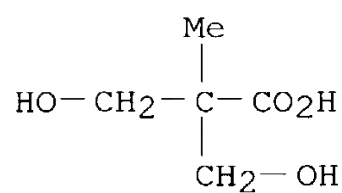
CMF C8 H12 N4 O2



CM 6

CRN 4767-03-7

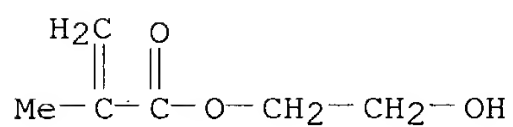
CMF C5 H10 O4



CM 7

CRN 868-77-9

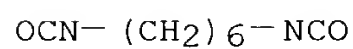
CMF C6 H10 O3



CM 8

CRN 822-06-0

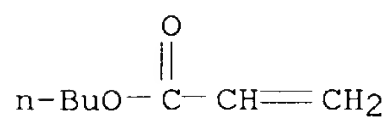
CMF C8 H12 N2 O2



CM 9

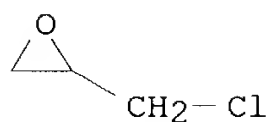
CRN 141-32-2

CMF C7 H12 O2



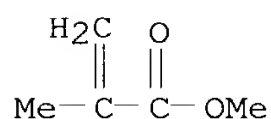
CM 10

CRN 106-89-8  
CMF C3 H5 Cl O



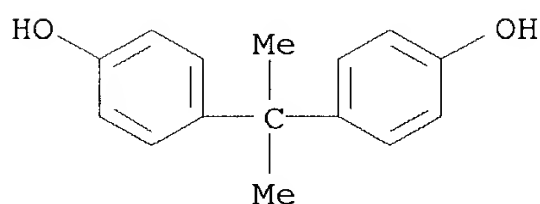
CM 11

CRN 80-62-6  
CMF C5 H8 O2



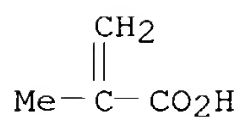
CM 12

CRN 80-05-7  
CMF C15 H16 O2



CM 13

CRN 79-41-4  
CMF C4 H6 O2

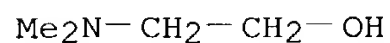


RN 155159-20-9 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, polymer with azobis[(hydroxymethyl)propanenitrile], bis(isocyanatomethyl)benzene, butyl 2-propenoate, 1,6-diisocyanatohexane,  $\alpha$ -hydro- $\omega$ -hydroxypoly[oxy(methyl-1,2-ethanediyl)], 2-hydroxyethyl 2-methyl-2-propenoate, 3-hydroxy-2-(hydroxymethyl)-2-methylpropanoic acid and methyl 2-methyl-2-propenoate, block, compd. with 2-(dimethylamino)ethanol (9CI) (CA INDEX NAME)

CM 1

CRN 108-01-0

CMF C4 H11 N O



CM 2

CRN 155159-19-6

CMF (C10 H8 N2 O2 . C8 H12 N4 O2 . C8 H12 N2 O2 . C7 H12 O2 . C6 H10 O3 .  
C5 H10 O4 . C5 H8 O2 . C4 H6 O2 . (C3 H6 O)n H2 O)x

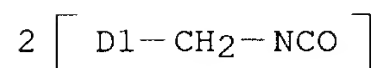
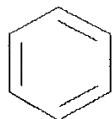
CCI PMS

CM 3

CRN 25854-16-4

CMF C10 H8 N2 O2

CCI IDS

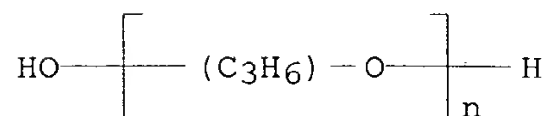


CM 4

CRN 25322-69-4

CMF (C3 H6 O)n H2 O

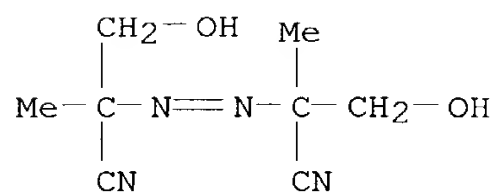
CCI IDS, PMS



CM 5

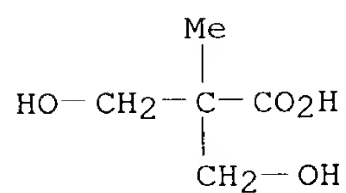
CRN 19706-80-0

CMF C8 H12 N4 O2



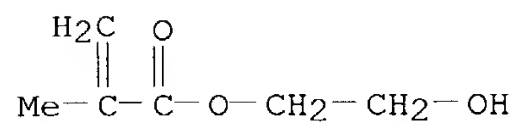
CM 6

CRN 4767-03-7  
CMF C5 H10 O4



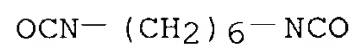
CM 7

CRN 868-77-9  
CMF C6 H10 O3



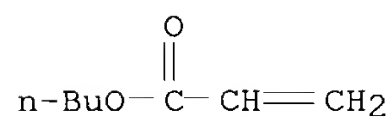
CM 8

CRN 822-06-0  
CMF C8 H12 N2 O2



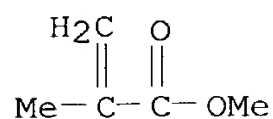
CM 9

CRN 141-32-2  
CMF C7 H12 O2



CM 10

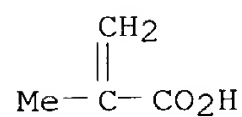
CRN 80-62-6  
CMF C5 H8 O2



CM 11

CRN 79-41-4

CMF C4 H6 O2



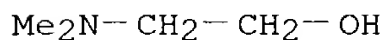
RN 155279-64-4 HCAPLUS

CN Hexanoic acid, 6-hydroxy-, 2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl ester, polymer with 5,5'-azobis[cyano-1-pentanol], Burnock DN 990, butyl 2-propenoate, 1,6-diisocyanatohexane, 2,2-dimethyl-1,3-propanediol, ethenylbenzene, 2-ethyl-2-(hydroxymethyl)-1,3-propanediol, 3-hydroxy-2-(hydroxymethyl)-2-methylpropanoic acid, methyl 2-methyl-2-propenoate and 2-methyl-2-propenoic acid, block, compd. with 2-(dimethylamino)ethanol (9CI) (CA INDEX NAME)

CM 1

CRN 108-01-0

CMF C4 H11 N O



CM 2

CRN 155279-63-3

CMF (C12 H20 N4 O2 . C12 H20 O5 . C8 H12 N2 O2 . C8 H8 . C7 H12 O2 . C6 H14 O3 . C5 H12 O2 . C5 H10 O4 . C5 H8 O2 . C4 H6 O2 . Unspecified)x

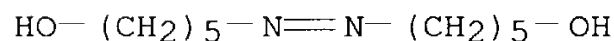
CCI PMS

CM 3

CRN 155279-62-2

CMF C12 H20 N4 O2

CCI IDS



2 ( D1-CN )



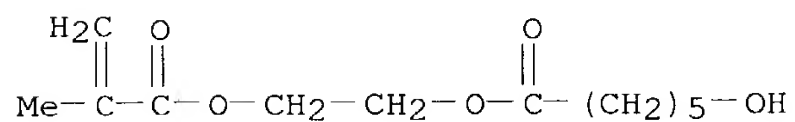
CM 4

CRN 122302-79-8  
CMF Unspecified  
CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

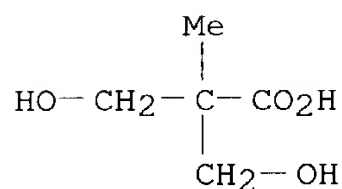
CM 5

CRN 85099-10-1  
CMF C12 H20 O5



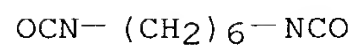
CM 6

CRN 4767-03-7  
CMF C5 H10 O4



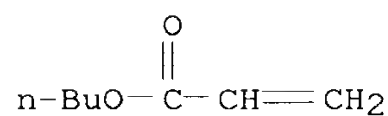
CM 7

CRN 822-06-0  
CMF C8 H12 N2 O2



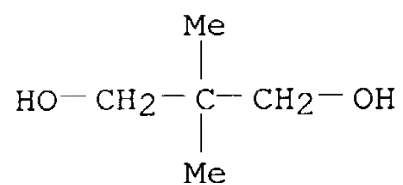
CM 8

CRN 141-32-2  
CMF C7 H12 O2



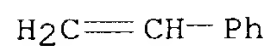
CM 9

CRN 126-30-7  
CMF C5 H12 O2



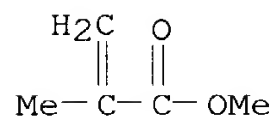
CM 10

CRN 100-42-5  
CMF C8 H8



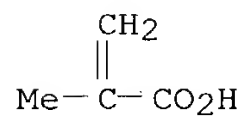
CM 11

CRN 80-62-6  
CMF C5 H8 O2



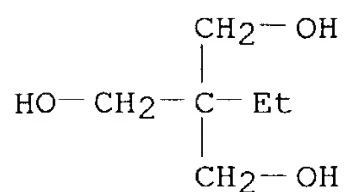
CM 12

CRN 79-41-4  
CMF C4 H6 O2



CM 13

CRN 77-99-6  
CMF C6 H14 O3



IT 155157-09-8 155319-99-6

RL: MOA (Modifier or additive use); USES (Uses)

(**crosslinking** agents, for block acrylic polyurethanes, for **coatings**)

RN 155157-09-8 HCAPLUS

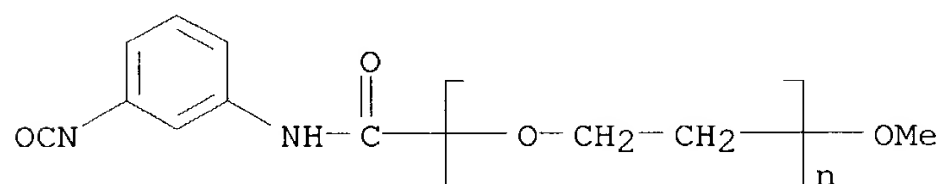
CN 9-Octadecenoic acid (9Z)-, monoester with 1,2,3-propanetriol, polymer with Coronate EH and  $\alpha$ -[[[3(or 5)-isocyanato-4(or 2)-methylphenyl]amino]carbonyl]- $\omega$ -methoxypoly(oxy-1,2-ethanediyl) (9CI)  
(CA INDEX NAME)

CM 1

CRN 155157-08-7

CMF (C2 H4 O)<sub>n</sub> C10 H10 N2 O3

CCI IDS, PMS



D1-Me

CM 2

CRN 86472-86-8

CMF Unspecified

CCI MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 3

CRN 25496-72-4

CMF C21 H40 O4

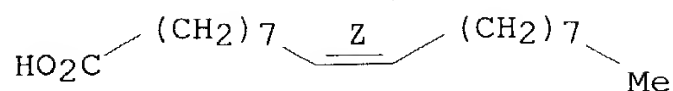
CCI IDS

CM 4

CRN 112-80-1

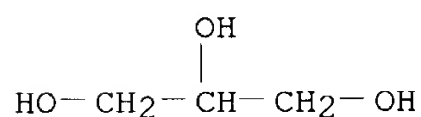
CMF C18 H34 O2

Double bond geometry as shown.



CM 5

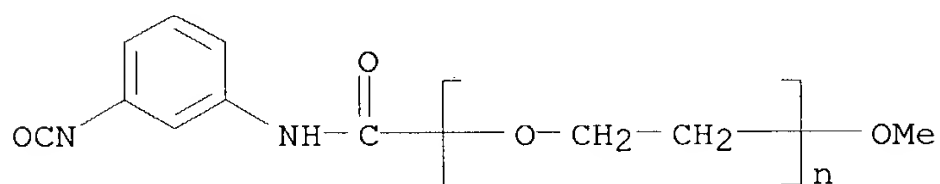
CRN 56-81-5  
CMF C3 H8 O3



RN 155319-99-6 HCAPLUS  
CN 9-Octadecenoic acid (9Z)-, monoester with 1,2,3-propanetriol, polymer with 1,6-diisocyanatohexane trimer and  $\alpha$ -[[[3(or 5)-isocyanato-4(or 2)-methylphenyl]amino]carbonyl]- $\omega$ -hydroxypoly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

CM 1

CRN 155157-08-7  
CMF (C2 H4 O)<sub>n</sub> C10 H10 N2 O3  
CCI IDS, PMS



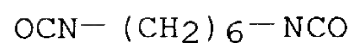
D1-Me

CM 2

CRN 28574-90-5  
CMF (C8 H12 N2 O2)<sub>3</sub>  
CCI PMS

CM 3

CRN 822-06-0  
CMF C8 H12 N2 O2



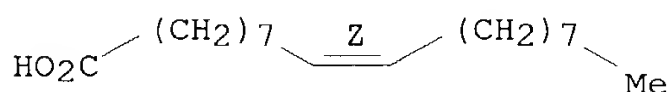
CM 4

CRN 25496-72-4  
CMF C21 H40 O4  
CCI IDS

CM 5

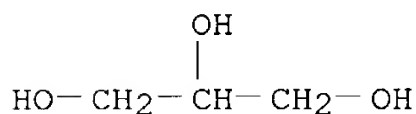
CRN 112-80-1  
CMF C18 H34 O2

Double bond geometry as shown.



CM 6

CRN 56-81-5  
CMF C3 H8 O3



L56 ANSWER 27 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1993:82960 HCAPLUS

DN 118:82960

TI Cationic **epoxy** electrophoretic base layers and **aqueous**  
(**polyurethane**)-**polyester** top layers in **coating**  
formation

IN Kasukawa, Takahisa; Tabuchi, Ichiro; Katayama, Teiji; Morino, Mitsuharu;  
Inoue, Yutaka; Ogoshi, Toshio

PA Kansai Paint Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 27 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 04143295	A2	19920518	JP 1990-268698	19901005
	JP 2975078	B2	19991110		
PRAI	JP 1990-268698		19901005		

AB The formation of **coatings** having good gloss and solvent popping resistance includes applying cationic electrophoretic compns. which show ≤10% weight loss after baking and wet-on-wet applying **aqueous** top layers comprising (A) (**polyurethanes**)-**polyesters** having acid value 10-100 and OH value 20-300 (B) **aqueous** aminoplasts, (c) hydroxyethylethyleneurea and/or cyclohexanedimethanol- and aliphatic diacid-based **polyester** diol having average mol. weight 300-800, and (D) alkyletherated benzoin. Thus, a phosphated steel panel

was soaked in a pH 5.6 solution containing pigments, HCO<sub>2</sub>H, Epikote 1004-diethanolamine reaction product, and EHPE 3150 at 200-300 V for 3 min, **water** washed, dried at 100° for 10 min, sprayed with an **aqueous** solution containing ethylene glycol-trimethylolpropane-phthalic anhydride-TDI-trimellitic anhydride copolymer dimethylethanolamine salt, Cymel 703, Ucar Rd 65-2, and benzoin Et ether baked at 160° for 0.5 h, a covered with a black finish and baked at 140° for 0.5 h to give a surface with gloss 92% and maximum total thickness for solvent popping prevention >80 µm.

- IC ICM C25D013-00
- ICS C09D005-44; C09D007-12; C09D161-20; C09D163-00; C09D167-02; C09D175-04
- CC 42-10 (**Coatings**, Inks, and Related Products)
- ST cationic **epoxy** electrodeposition base **coating**;  
melamine resin **crosslinked** polyurethane **coating**;  
trimellitate **polyester** polyurethane top **coating**; TDI  
**polyester** polyurethane top **coating**; phthalate  
**polyester** polyurethane top **coating**; trimethylolpropane  
**polyester** polyurethane top **coating**; ethylene glycol  
**polyester** polyurethane top **coating**; **polyurethane**  
**polyester** **waterborne** top **coating**; glossy  
multilayer **coating**; solvent popping resistance multilayer  
**coating**; hydroxyethylethyleneurea **polyester** top  
**coating**; cyclohexanedimethanol **polyester** diol top  
**coating**
- IT **Epoxy** resins, uses  
RL: USES (Uses)  
(cationic derivs., electrophoretic pigmented base **coatings**,  
with wet-on-wet-applied **aqueous** (**polyurethane**)-  
**polyester** top layers, glossy)
- IT Electrodeposits and Electroplates  
(cationic **epoxy**, with **waterborne** (**polyurethane**)-**polyester** top layers, glossy  
solvent-popping-resistant)
- IT **Urethane** polymers, uses  
RL: USES (Uses)  
(**polyester**-, **waterborne** top **coatings**,  
with **epoxy** electrophoretic pigment base layers, solvent  
popping-resistant)
- IT **Coating** materials  
(**water**-thinned, (**polyurethane**)-**polyester**  
top layers, with cationic **epoxy** electrophoretic pigmented  
base layers, glossy and solvent-popping-resistant)
- IT 77-99-6D, cationic **epoxy** resin derivs., salts with formic acid  
80-05-7D, cationic **epoxy** resin derivs., salts with formic acid  
96-08-2D, cationic **epoxy** resin derivs., salts with formic acid  
100-40-3D, 4-Vinylcyclohexene, cationic **epoxy** resin derivs.,  
salts with formic acid 109-83-1D, N-Methylaminoethanol, cationic  
**epoxy** resin derivs., salts with formic acid 111-42-2D, cationic  
**epoxy** resin derivs., salts with formic acid 141-43-5D,  
Monoethanolamine, cationic **epoxy** resin derivs., salts with  
formic acid 1675-54-3D, cationic derivs., salts with formic acid  
1740-64-3D, cationic **epoxy** resin derivs., salts with formic acid  
2886-87-5D, cationic **epoxy** resin derivs., salts with formic acid  
3845-76-9D, N,N-Dimethylaminopropyl **acrylamide**, cationic  
**epoxy** resin derivs., salts with formic acid 7313-32-8D,  
Cyclopentadiene dimer, cationic **epoxy** resin derivs., salts with  
formic acid 16096-30-3D, cationic derivs., salts with formic acid

25068-38-6D, Epikote 1004, reaction products with alkanolamines and alicyclic **epoxides**, salts with formic acid 25086-25-3D, EHPE 3150, cationic derivs., formate salts 82428-30-6D, METHB (**methacrylate**), cationic **epoxy** resin derivs., salts with formic acid 114421-39-5D, cationic **epoxy** resin derivs., salts with formic acid 128703-09-3D, cationic **epoxy** resin derivs., salts with formic acid 128703-10-6D, cationic **epoxy** resin derivs., salts with formic acid 128771-71-1D, Araldite XB 4122, cationic derivs., salts with formic acid 137388-50-2D, cationic **epoxy** resin derivs., salts with formic acid **145671-28-9D**, reaction product with alkanolamines **145900-70-5D**, reaction product with alkanolamines

RL: USES (Uses)

(electrophoretic pigmented base **coatings**, with wet-on-wet-applied **aqueous (polyurethane)-polyester** top layers, glossy)

IT 3699-54-5D, Ucar RD 65-2, reaction products with **polyester-polyurethanes 145671-30-3D**, reaction product with Ucar RD 65-2 **145671-32-5D**, reaction product with Ucar RD 65-2 **145900-71-6D**, reaction product with Ucar RD 65-2

RL: USES (Uses)

(**waterborne** top **coatings**, with **epoxy** electrophoretic pigment base layers, solvent popping-resistant)

IT **145671-28-9D**, reaction product with alkanolamines **145900-70-5D**, reaction product with alkanolamines

RL: USES (Uses)

(electrophoretic pigmented base **coatings**, with wet-on-wet-applied **aqueous (polyurethane)-polyester** top layers, glossy)

RN 145671-28-9 HCAPLUS

CN Phenol, 4,4'-(1-methylethylidene)bis-, polymer with Araldite GY 2600, bis(isocyanatomethyl)benzene, (chloromethyl)oxirane,  $\alpha$ -hydro- $\omega$ -hydroxypoly[oxy(methyl-1,2-ethanediyl)] and Placel 205 (9CI) (CA INDEX NAME)

CM 1

CRN 109489-28-3

CMF Unspecified

CCI MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 2

CRN 94188-96-2

CMF Unspecified

CCI PMS, MAN

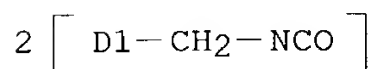
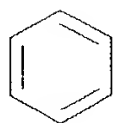
\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 3

CRN 25854-16-4

CMF C10 H8 N2 O2

CCI IDS

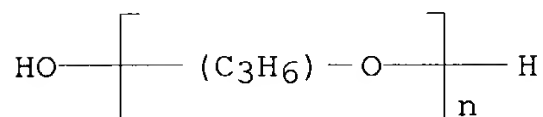


CM 4

CRN 25322-69-4

CMF (C3 H6 O)<sub>n</sub> H2 O

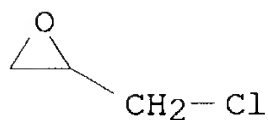
CCI IDS, PMS



CM 5

CRN 106-89-8

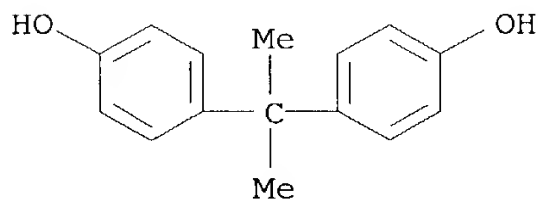
CMF C3 H5 Cl O



CM 6

CRN 80-05-7

CMF C15 H16 O2



RN 145900-70-5 HCAPLUS

CN Phenol, 4,4'-(1-methylethylidene)bis-, polymer with Araldite GY 2600, (chloromethyl)oxirane, α-hydro-ω-hydroxypoly[oxy(methyl-1,2-ethanediyl)], 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane and Placel 205 (9CI) (CA INDEX NAME)

CM 1

CRN 109489-28-3



CMF Unspecified  
CCI MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

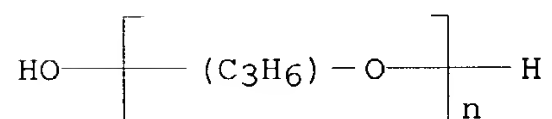
CM 2

CRN 94188-96-2  
CMF Unspecified  
CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

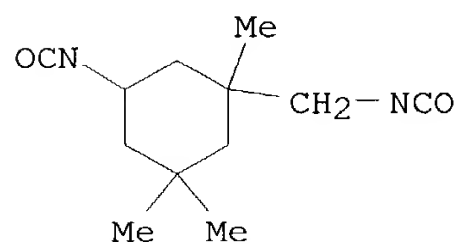
CM 3

CRN 25322-69-4  
CMF (C3 H6 O)<sub>n</sub> H2 O  
CCI IDS, PMS



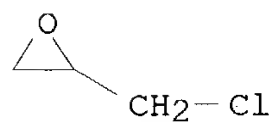
CM 4

CRN 4098-71-9  
CMF C12 H18 N2 O2



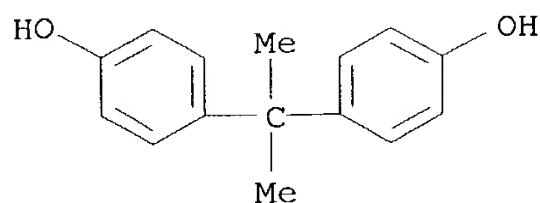
CM 5

CRN 106-89-8  
CMF C3 H5 Cl O



CM 6

CRN 80-05-7  
CMF C15 H16 O2



IT 145671-30-3D, reaction product with Ucar RD 65-2  
 145671-32-5D, reaction product with Ucar RD 65-2  
 145900-71-6D, reaction product with Ucar RD 65-2  
 RL: USES (Uses)

(waterborne top coatings, with epoxy  
 electrophoretic pigment base layers, solvent popping-resistant)

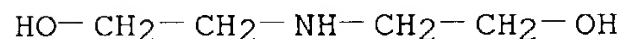
RN 145671-30-3 HCAPLUS

CN L-Glutamic acid, polymer with bis(isocyanatomethyl)benzene, butanedioic acid, cyclohexanedimethanol, 1,3-dihydro-1,3-dioxo-5-isobenzofurancarboxylic acid, 1,2-ethanediol, 2-ethyl-2-(hydroxymethyl)-1,3-propanediol, formaldehyde, hexanedioic acid, 1,3-isobenzofurandione and 1,3,5-triazine-2,4,6-triamine, compd. with 2,2'-iminobis[ethanol] (9CI) (CA INDEX NAME)

CM 1

CRN 111-42-2

CMF C4 H11 N O2



CM 2

CRN 145671-29-0

CMF (C10 H8 N2 O2 . C9 H4 O5 . C8 H16 O2 . C8 H4 O3 . C6 H14 O3 . C6 H10 O4 . C5 H9 N O4 . C4 H6 O4 . C3 H6 N6 . C2 H6 O2 . C H2 O)x

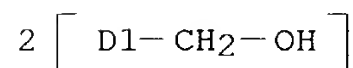
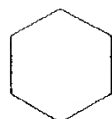
CCI PMS

CM 3

CRN 27193-25-5

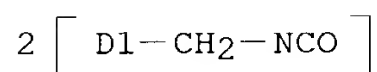
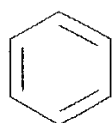
CMF C8 H16 O2

CCI IDS



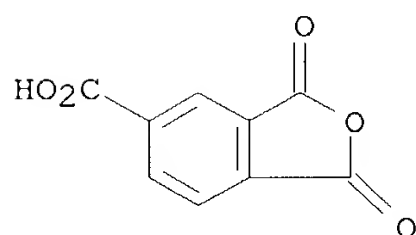
CM 4

CRN 25854-16-4  
CMF C10 H8 N2 O2  
CCI IDS



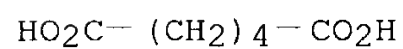
CM 5

CRN 552-30-7  
CMF C9 H4 O5



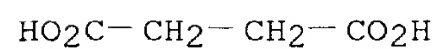
CM 6

CRN 124-04-9  
CMF C6 H10 O4



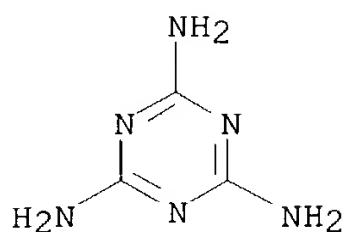
CM 7

CRN 110-15-6  
CMF C4 H6 O4



CM 8

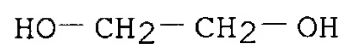
CRN 108-78-1  
CMF C3 H6 N6



CM 9

CRN 107-21-1

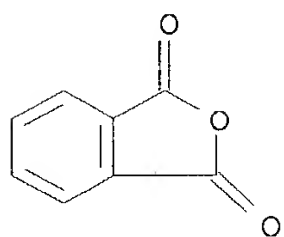
CMF C2 H6 O2



CM 10

CRN 85-44-9

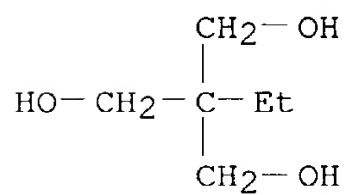
CMF C8 H4 O3



CM 11

CRN 77-99-6

CMF C6 H14 O3

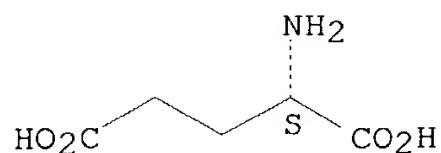


CM 12

CRN 56-86-0

CMF C5 H9 N O4

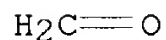
Absolute stereochemistry.



CM 13

CRN 50-00-0

CMF C H2 O



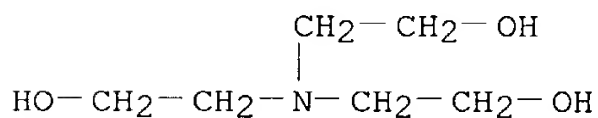
RN 145671-32-5 HCAPLUS

CN Hexanedioic acid, polymer with cyclohexanedimethanol, 1,3-diisocyanatomethylbenzene, 1,2-ethanediol, formaldehyde, 1,3-isobenzofurandione, 1,2,3-propanetriol and 1,3,5-triazine-2,4,6-triamine, compd. with 2,2',2''-nitrilotris[ethanol] (9CI) (CA INDEX NAME)

CM 1

CRN 102-71-6

CMF C6 H15 N O3



CM 2

CRN 145671-31-4

CMF (C9 H6 N2 O2 . C8 H16 O2 . C8 H4 O3 . C6 H10 O4 . C3 H8 O3 . C3 H6 N6 . C2 H6 O2 . C H2 O)x

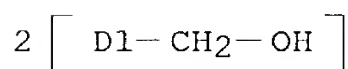
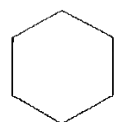
CCI PMS

CM 3

CRN 27193-25-5

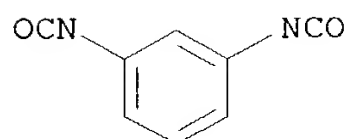
CMF C8 H16 O2

CCI IDS



CM 4

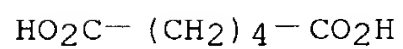
CRN 26471-62-5  
CMF C9 H6 N2 O2  
CCI IDS



D1-Me

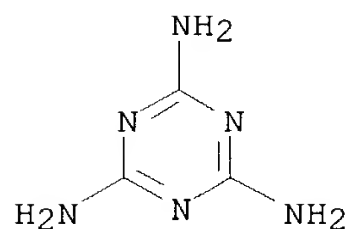
CM 5

CRN 124-04-9  
CMF C6 H10 O4



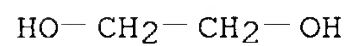
CM 6

CRN 108-78-1  
CMF C3 H6 N6



CM 7

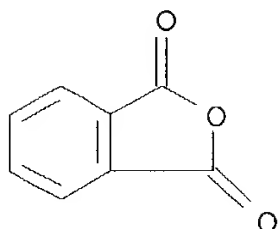
CRN 107-21-1  
CMF C2 H6 O2



CM 8

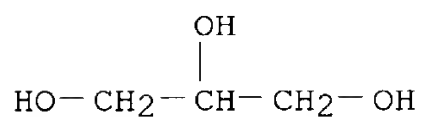
CRN 85-44-9

CMF C8 H4 O3



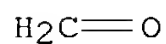
CM 9

CRN 56-81-5  
CMF C3 H8 O3



CM 10

CRN 50-00-0  
CMF C H2 O



RN 145900-71-6 HCAPLUS  
CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, polymer with  
1,3-diisocyanatomethylbenzene, 1,2-ethanediol, 2-ethyl-2-(hydroxymethyl)-  
1,3-propanediol, formaldehyde, 1,3-isobenzofurandione and  
1,3,5-triazine-2,4,6-triamine, compd. with 2,2'-iminobis[ethanol] (9CI)  
(CA INDEX NAME)

CM 1

CRN 111-42-2  
CMF C4 H11 N O2

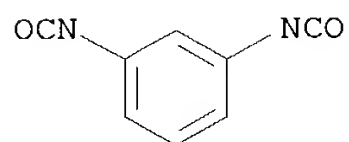


CM 2

CRN 142146-53-0  
CMF (C9 H6 N2 O2 . C9 H4 O5 . C8 H4 O3 . C6 H14 O3 . C3 H6 N6 . C2 H6 O2  
. C H2 O)x  
CCI PMS

CM 3

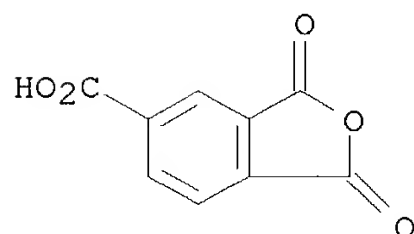
CRN 26471-62-5  
CMF C9 H6 N2 O2  
CCI IDS



D1-Me

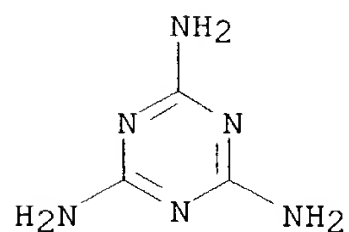
CM 4

CRN 552-30-7  
CMF C9 H4 O5



CM 5

CRN 108-78-1  
CMF C3 H6 N6



CM 6

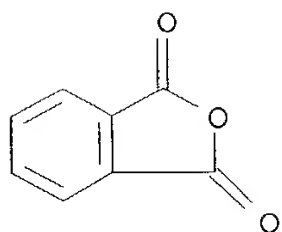
CRN 107-21-1  
CMF C2 H6 O2

HO-CH<sub>2</sub>-CH<sub>2</sub>-OH

CM 7

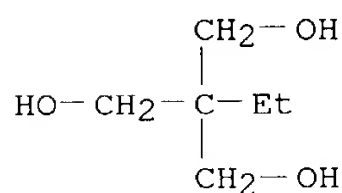


CRN 85-44-9  
CMF C8 H4 O3



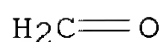
CM 8

CRN 77-99-6  
CMF C6 H14 O3



CM 9

CRN 50-00-0  
CMF C H2 O



L56 ANSWER 28 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1992:614633 HCAPLUS

DN 117:214633

TI Radiation-curable resin compositions for **coatings**

IN Kinoshita, Masayuki; Sakakibara, Shigeru; Ishikawa, Hidenori

PA Dainippon Inki Kagaku Kogyo K. K., Japan

SO Jpn. Kokai Tokkyo Koho, 11 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 04091162	A2	19920324	JP 1990-208896	19900807
PRAI	JP 1990-208896		19900807		

AB Title compns. comprise organic solvents, reactive diluents, and(or) **water** and reaction products of epoxy compds. and unsatd. monocarboxylic acids with polymers having alkali metal sulfonate backbone and optionally containing urethane groups and ethylenic unsatd. bonds. Thus, a mixture of 3 parts 1-hydroxyhexyl **Ph** ketone and 100 parts adipic

acid-Epiclon N 695 acrylate-2-hydroxyethyl acrylate-3-methyl-1,5-pentanediol-Na dimethyl sulfoisophthalate-TDI copolymer was coated on a plate and cured with Hg lamp for 5 s to give a **coating** with good resistance to moisture, solvents, and alkali and good thermal stability.

IC ICM C08L075-04  
ICS C08F299-02; C08F299-06; C08G018-67; C08K005-00; C08K005-10; C08L075-04

ICA C09D005-00; C09D011-00; C09D175-04; C09J175-04

CC 42-10 (**Coatings**, Inks, and Related Products)

ST acrylic epoxy urethane **coating**; **waterborne** acrylic **coating**; UV curable acrylic epoxy **coating**; radiation curable acrylic epoxy **coating**; reactive diluent urethane resin compn

IT **Coating** materials  
(UV-curable, **water**-thinned, acrylic urethane, sodium sulfonate-group containing, manufacture of)

IT Urethane polymers, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(acrylic-epoxy, **coatings**, sodium sulfonate-group containing, manufacture of)

IT Epoxy resins, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(acrylic-polyurethane-, **coatings**, sodium sulfonate-group containing, manufacture of)

IT **Crosslinking**  
(photochem., of acrylic polyurethane epoxy compns., for **coatings**)

IT **144328-20-1P 144442-47-7P 144442-48-8P 144442-49-9P**  
RL: PREP (Preparation)  
(manufacture of, for radiation-curable **coatings**)

IT 26570-48-9, Polyethylene glycol diacrylate  
RL: USES (Uses)  
(reactive diluent, in radiation-curable **waterborne** acrylic urethane **coatings**)

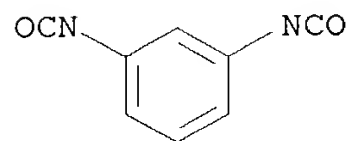
IT **144328-20-1P 144442-47-7P 144442-48-8P 144442-49-9P**  
RL: PREP (Preparation)  
(manufacture of, for radiation-curable **coatings**)

RN 144328-20-1 HCAPLUS

CN 1,3-Benzenedicarboxylic acid, 5-sulfo-, 1,3-dimethyl ester, sodium salt, polymer with (chloromethyl)oxirane polymer with 4,4'-(1-methylethylidene)bis[phenol] 2-propenoate, 1,3-diisocyanatomethylbenzene, hexanedioic acid, 2-hydroxyethyl 2-propenoate and 3-methyl-1,5-pentanediol (9CI) (CA INDEX NAME)

CM 1

CRN 26471-62-5  
CMF C9 H6 N2 O2  
CCI IDS

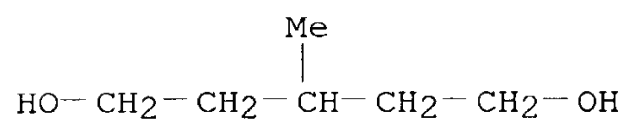


D1-Me

CM 2

CRN 4457-71-0

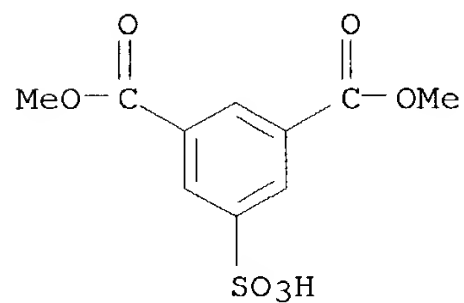
CMF C6 H14 O2



CM 3

CRN 3965-55-7

CMF C10 H10 O7 S . Na

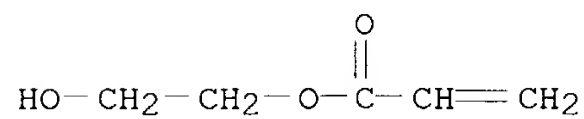


● Na

CM 4

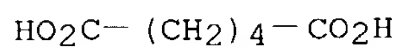
CRN 818-61-1

CMF C5 H8 O3



CM 5

CRN 124-04-9  
CMF C6 H10 O4

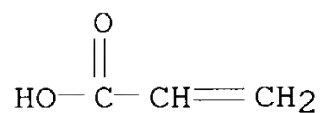


CM 6

CRN 55818-57-0  
CMF (C15 H16 O2 . C3 H5 Cl O)x . x C3 H4 O2

CM 7

CRN 79-10-7  
CMF C3 H4 O2

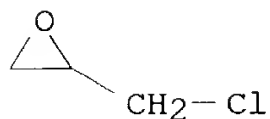


CM 8

CRN 25068-38-6  
CMF (C15 H16 O2 . C3 H5 Cl O)x  
CCI PMS

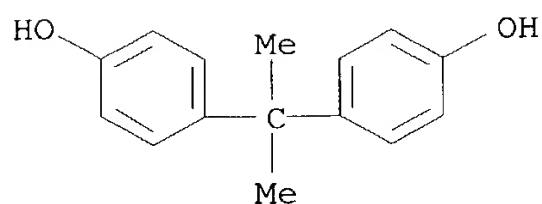
CM 9

CRN 106-89-8  
CMF C3 H5 Cl O



CM 10

CRN 80-05-7  
CMF C15 H16 O2

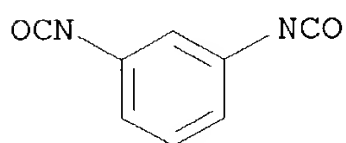


RN 144442-47-7 HCAPLUS

CN 1,3-Benzenedicarboxylic acid, 5-sulfo-, 1,3-dimethyl ester, sodium salt, polymer with 1,3-diisocyanatomethylbenzene, Epiclon N 695 2-propenoate, hexanedioic acid, 2-hydroxyethyl 2-propenoate and 3-methyl-1,5-pentanediol (9CI) (CA INDEX NAME)

CM 1

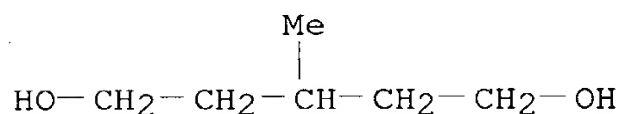
CRN 26471-62-5  
CMF C9 H6 N2 O2  
CCI IDS



D1-Me

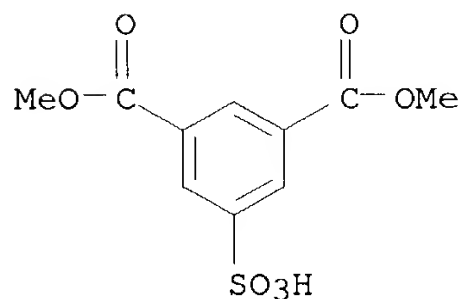
CM 2

CRN 4457-71-0  
CMF C6 H14 O2



CM 3

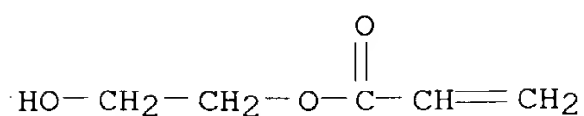
CRN 3965-55-7  
CMF C10 H10 O7 S . Na



● Na

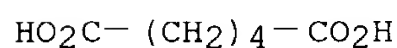
CM 4

CRN 818-61-1  
CMF C5 H8 O3



CM 5

CRN 124-04-9  
CMF C6 H10 O4



CM 6

CRN 144046-04-8  
CMF C3 H4 O2 . x Unspecified

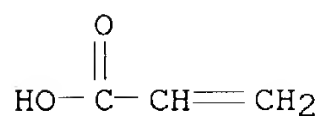
CM 7

CRN 91594-04-6  
CMF Unspecified  
CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 8

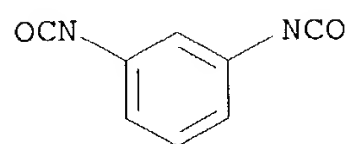
CRN 79-10-7  
CMF C3 H4 O2



RN 144442-48-8 HCAPLUS  
CN 1,3-Benzenedicarboxylic acid, 5-sulfo-, 1,3-dimethyl ester, sodium salt, polymer with 1,3-diisocyanatomethylbenzene, Epiclon N 695 2-propenoate, hexanedioic acid, 1,6-hexanediol, 2-(hydroxymethyl)-2-[[[1-oxo-2-propenyl)oxy)methyl]-1,3-propanediyl di-2-propenoate and 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane (9CI) (CA INDEX NAME)

CM 1

CRN 26471-62-5  
CMF C9 H6 N2 O2  
CCI IDS

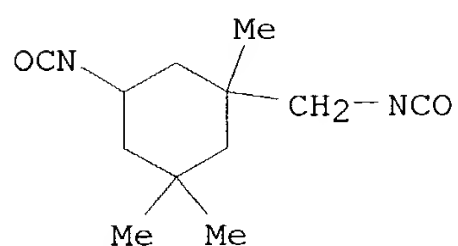


D1-Me

CM 2

CRN 4098-71-9

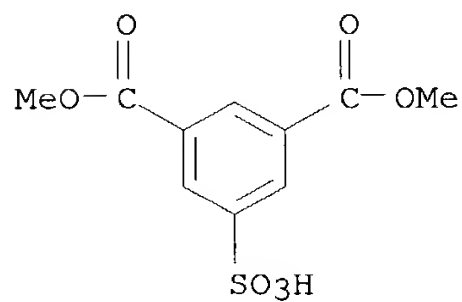
CMF C12 H18 N2 O2



CM 3

CRN 3965-55-7

CMF C10 H10 O7 S . Na

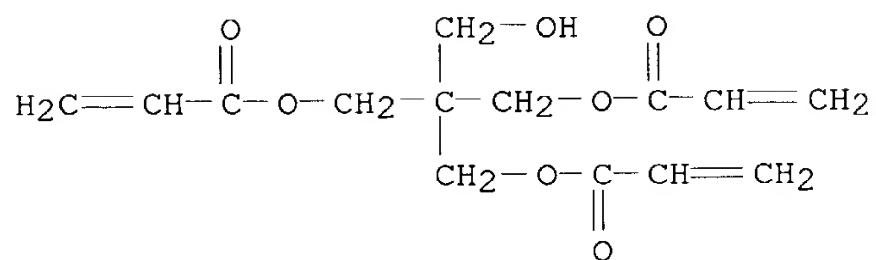


● Na

CM 4

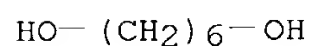
CRN 3524-68-3

CMF C14 H18 O7



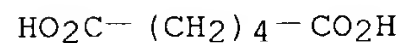
CM 5

CRN 629-11-8  
CMF C6 H14 O2



CM 6

CRN 124-04-9  
CMF C6 H10 O4



CM 7

CRN 144046-04-8  
CMF C3 H4 O2 . x Unspecified

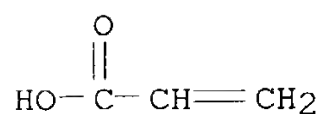
CM 8

CRN 91594-04-6  
CMF Unspecified  
CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 9

CRN 79-10-7  
CMF C3 H4 O2



RN 144442-49-9 HCAPLUS  
CN 1,3-Benzenedicarboxylic acid, 5-sulfo-, 1,3-dimethyl ester, sodium salt,  
polymer with 1,3-diisocyanatomethylbenzene, Epiclon N 695

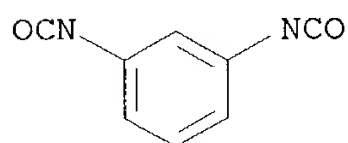
KATHLEEN FULLER EIC 1700 REMSEN 4B28 571/272-2505



2-methyl-2-propenoate 2-propenoate, hexanedioic acid, 1,6-hexanediol,  
2-(hydroxymethyl)-2-[[ (1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl  
di-2-propenoate and 5-isocyanato-1-(isocyanatomethyl)-1,3,3-  
trimethylcyclohexane (9CI) (CA INDEX NAME)

CM 1

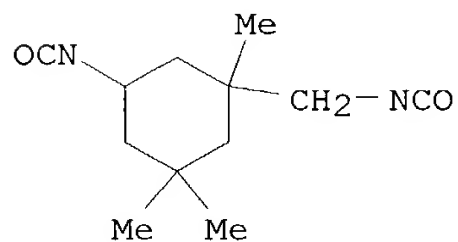
CRN 26471-62-5  
CMF C9 H6 N2 O2  
CCI IDS



D1-Me

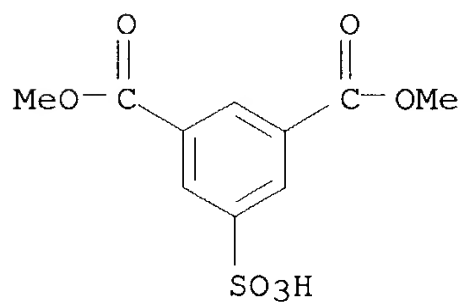
CM 2

CRN 4098-71-9  
CMF C12 H18 N2 O2



CM 3

CRN 3965-55-7  
CMF C10 H10 O7 S . Na

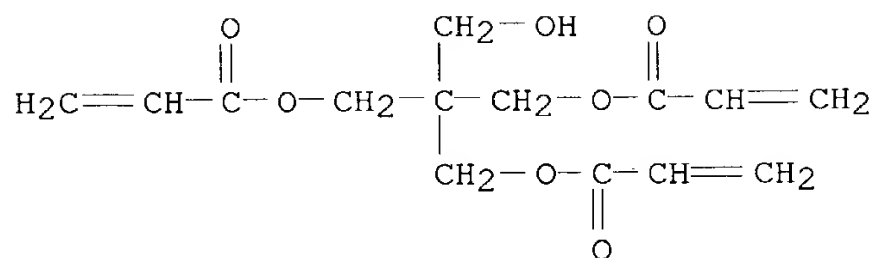


● Na

CM 4

CRN 3524-68-3

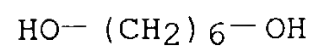
CMF C14 H18 O7



CM 5

CRN 629-11-8

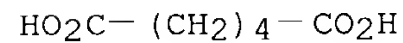
CMF C6 H14 O2



CM 6

CRN 124-04-9

CMF C6 H10 O4



CM 7

CRN 144046-03-7

CMF C4 H6 O2 . x C3 H4 O2 . x Unspecified

CM 8

CRN 91594-04-6

CMF Unspecified

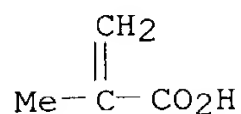
CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 9

CRN 79-41-4

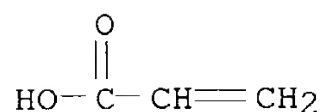
CMF C4 H6 O2



CM 10

CRN 79-10-7

CMF C3 H4 O2



L56 ANSWER 29 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1992:613774 HCAPLUS

DN 117:213774

TI Radiation-curable **aqueous** resin compositions

IN Kinoshita, Masayuki; Sakakibara, Shigeru; Ishikawa, Hidenori

PA Dainippon Ink and Chemicals, Inc., Japan

SO Jpn. Kokai Tokkyo Koho, 10 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 04114020	A2	19920415	JP 1990-235340	19900905
PRAI	JP 1990-235340		19900905		

AB The title emulsifier compns. useful for **coatings**, inks, etc., comprise a reaction product of compds. having alkali sulfonate salts and compds. obtained by reacting epoxy compds. with unsatd. monocarboxylic acids. Heating Epiclon N695 3195.0, 2,6-di-tert-butyl-4-methylphenol 12.8, hydroquinone monomethyl ether 1.3, acrylic acid 1080.0, and Ph3P 12.8 g at 110° to have an acid value ≤3, mixing (570.0 g) with 178.0 g TDI, 1027 g polyester-diol from Na di-Me sulfoisophthalate, 3-methyl-1,5-pentanediol (I), and adipic acid (II) and 0.5 g Bu2Sn diacetate, heating at 80° until no residual NCO group was observed, and heating at 80° with a 1:1 adduct of TDI and 2-hydroxyethyl acrylate until no NCO group was observed gave resin composition The composition 10,

1-hydroxyhexyl **Ph** ketone 3, and a urethane acrylate prepolymer prepared from I-II-TDI, polyester-polyurethane, and TDI-2-hydroxypropyl acrylate adduct 30, and **H2O** 30 parts gave a UV-cured **coating** with good heat, **water**, solvent, and alkali resistance.

IC ICM C08F299-02

CC 37-6 (Plastics Manufacture and Processing)

Section cross-reference(s): **42**

ST radiation curable **aq** resin compn; polyester polyurethane compn  
radiation curable; **coating** radiation curable urethane acrylate

IT Urethane polymers, preparation

RL: SPN (Synthetic preparation); TEM (Technical or engineered material)

use); PREP (Preparation); USES (Uses)  
 (epoxy-polyester-, radiation-curable, heat-, **water**-, alkali-,  
 and solvent-resistant)

IT Polyesters, preparation  
 RL: SPN (Synthetic preparation); TEM (Technical or engineered material  
 use); PREP (Preparation); USES (Uses)  
 (epoxy-polyurethane-, radiation-curable, heat-, **water**-,  
 alkali-, and solvent-resistant)

IT Epoxy resins, preparation  
 RL: SPN (Synthetic preparation); TEM (Technical or engineered material  
 use); PREP (Preparation); USES (Uses)  
 (polyester-polyurethane-, radiation-curable, heat-, **water**-,  
 alkali-, and solvent-resistant)

IT **Coating materials** -  
 (radiation-curable, polyester-polyurethane-epoxy resins, alkali-,  
 heat-, solvent-, and **water**-resistant)

IT **144307-50-6P 144307-51-7P 144307-52-8P**  
**144364-92-1P**  
 RL: SPN (Synthetic preparation); TEM (Technical or engineered material  
 use); PREP (Preparation); USES (Uses)  
 (radiation-curable, heat-, **water**-, alkali-, and  
 solvent-resistant)

IT **144307-50-6P 144307-51-7P 144307-52-8P**  
**144364-92-1P**  
 RL: SPN (Synthetic preparation); TEM (Technical or engineered material  
 use); PREP (Preparation); USES (Uses)  
 (radiation-curable, heat-, **water**-, alkali-, and  
 solvent-resistant)

RN 144307-50-6 HCAPLUS

CN 1,3-Benzenedicarboxylic acid, 5-sulfo-, 1,3-dimethyl ester, sodium salt,  
 polymer with 1,3-diisocyanatomethylbenzene, Epiclon N 695, hexanedioic  
 acid, 2-hydroxyethyl 2-propenoate, 2-hydroxypropyl 2-propenoate,  
 3-methyl-1,5-pentanediol and 2-propenoic acid (9CI) (CA INDEX NAME)

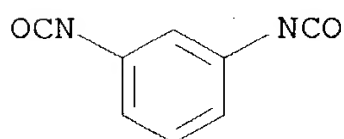
CM 1

CRN 91594-04-6  
 CMF Unspecified  
 CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 2

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 CMF C9 H6 N2 O2  
 CCI IDS

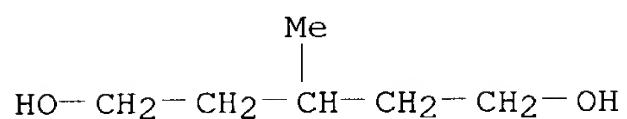


D1-Me

CM 3

CRN 4457-71-0

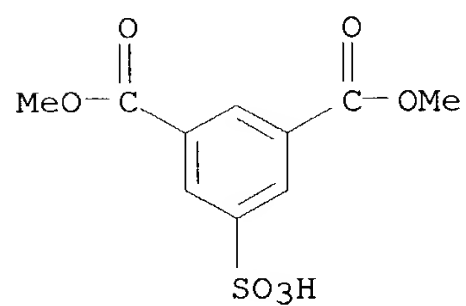
CMF C6 H14 O2



CM 4

CRN 3965-55-7

CMF C10 H10 O7 S . Na

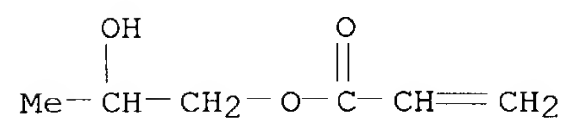


● Na

CM 5

CRN 999-61-1

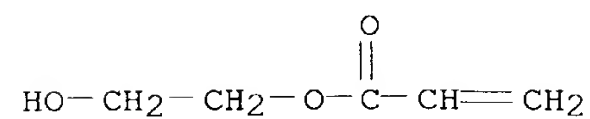
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CM 6

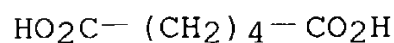
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CMF C5 H8 O3



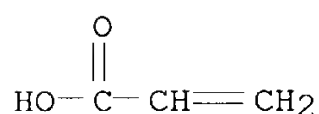
CM 7

CRN 124-04-9  
CMF C6 H10 O4



CM 8

CRN 79-10-7  
CMF C3 H4 O2



RN 144307-51-7 HCAPLUS  
CN Hexanedioic acid, polymer with 1,3-diisocyanatomethylbenzene, Epiclon N 695, 1,6-hexanediol, 2-(hydroxymethyl)-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate, 2-hydroxypropyl 2-propenoate, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane, 3-methyl-1,5-pentanediol and 2-propenoic acid (9CI) (CA INDEX NAME)

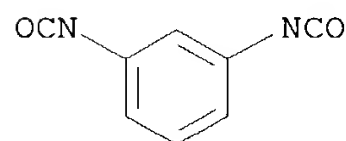
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CRN 91594-04-6  
CMF Unspecified  
CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 2

CRN 26471-62-5  
CMF C9 H6 N2 O2  
CCI IDS

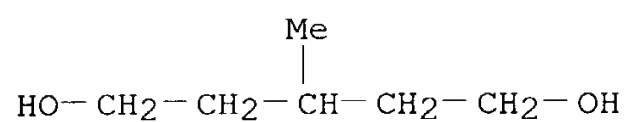


D1-Me

CM 3

CRN 4457-71-0

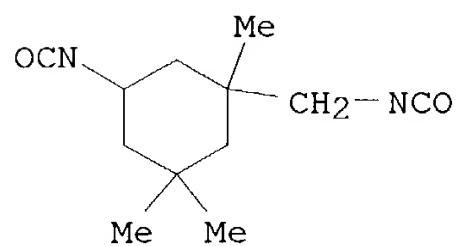
CMF C6 H14 O2



CM 4

CRN 4098-71-9

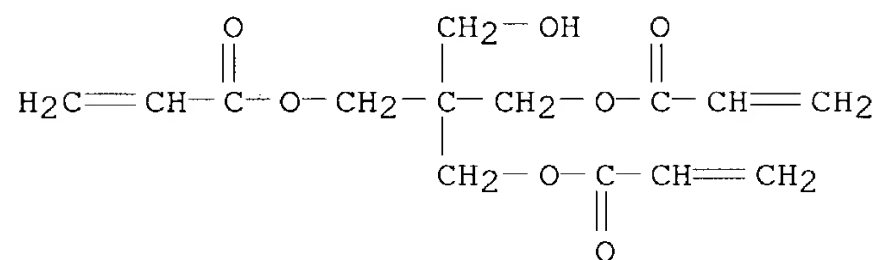
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CM 5

CRN 3524-68-3

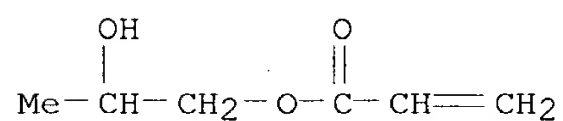
CMF C14 H18 O7



CM 6

CRN 999-61-1

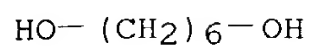
CMF C6 H10 O3



CM 7

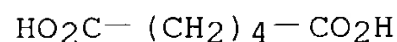
CRN 629-11-8

CMF C6 H14 O2



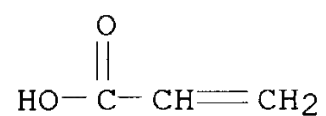
CM 8

CRN 124-04-9  
CMF C6 H10 O4



CM 9

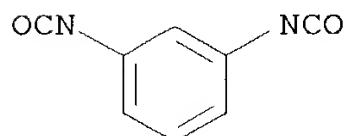
CRN 79-10-7  
CMF C3 H4 O2



RN 144307-52-8 HCAPLUS  
CN 1,3-Benzenedicarboxylic acid, 5-sulfo-, 1,3-dimethyl ester, sodium salt, polymer with (chloromethyl)oxirane, 1,3-diisocyanatomethylbenzene, hexanedioic acid, 2-hydroxyethyl 2-propenoate, 2-hydroxypropyl 2-propenoate, 4,4'-(1-methylethylidene)bis[phenol], 3-methyl-1,5-pentanediol and 2-propenoic acid (9CI) (CA INDEX NAME)

CM 1

CRN 26471-62-5  
CMF C9 H6 N2 O2  
CCI IDS

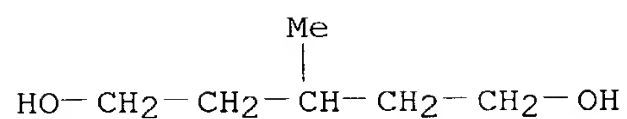


D1-Me

CM 2

CRN 4457-71-0  
CMF C6 H14 O2

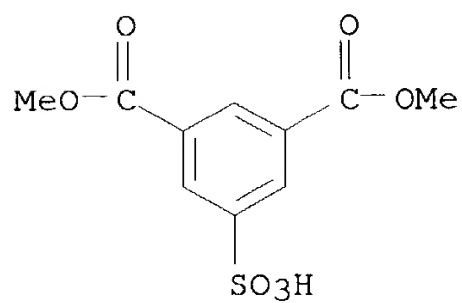




CM 3

CRN 3965-55-7

CMF C10 H10 O7 S . Na

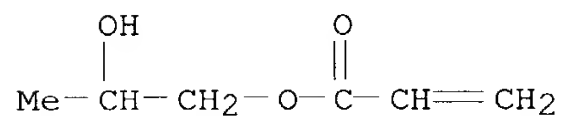


● Na

CM 4

CRN 999-61-1

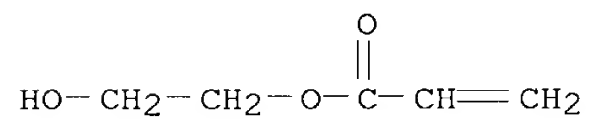
CMF C6 H10 O3



CM 5

CRN 818-61-1

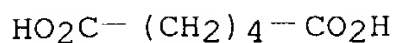
CMF C5 H8 O3



CM 6

CRN 124-04-9

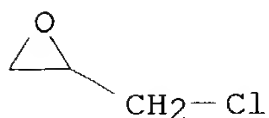
CMF C6 H10 O4



CM 7

CRN 106-89-8

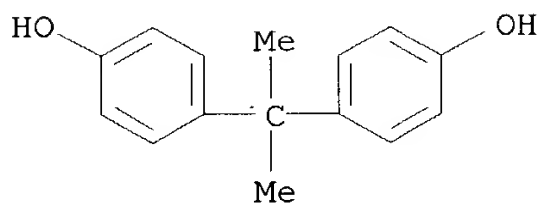
CMF C3 H5 Cl O



CM 8

CRN 80-05-7

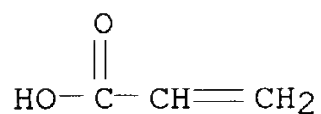
CMF C15 H16 O2



CM 9

CRN 79-10-7

CMF C3 H4 O2



RN 144364-92-1 HCAPLUS

CN Hexanedioic acid, polymer with 1,3-diisocyanatomethylbenzene, Epiclon N 695, 1,6-hexanediol, 2-(hydroxymethyl)-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate, 2-hydroxypropyl 2-propenoate, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane, 3-methyl-1,5-pentanediol and 2-methyl-2-propenoic acid (9CI) (CA INDEX NAME)

CM 1

CRN 91594-04-6

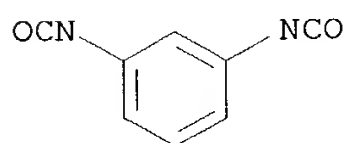
CMF Unspecified

CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 2

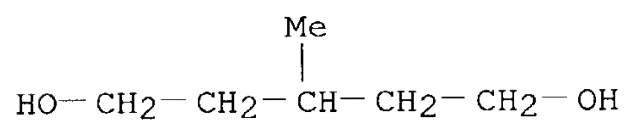
CRN 26471-62-5  
CMF C9 H6 N2 O2  
CCI IDS



D1-Me

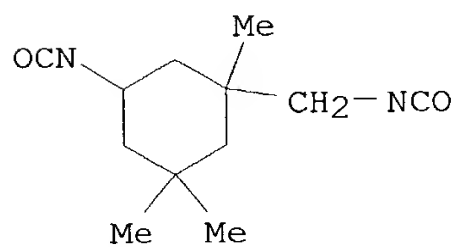
CM 3

CRN 4457-71-0  
CMF C6 H14 O2



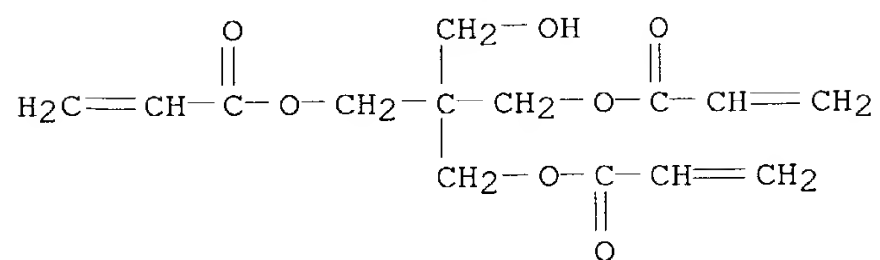
CM 4

CRN 4098-71-9  
CMF C12 H18 N2 O2



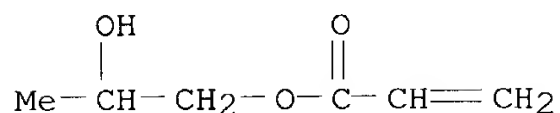
CM 5

CRN 3524-68-3  
CMF C14 H18 O7



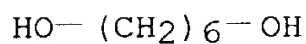
CM 6

CRN 999-61-1  
CMF C6 H10 O3



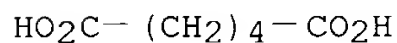
CM 7

CRN 629-11-8  
CMF C6 H14 O2



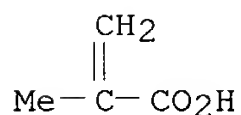
CM 8

CRN 124-04-9  
CMF C6 H10 O4



CM 9

CRN 79-41-4  
CMF C4 H6 O2



L56 ANSWER 30 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN  
AN 1992:492359 HCAPLUS  
DN 117:92359  
TI Curable resin compositions for **coatings**  
IN Miwa, Hiroshi; Kuwajima, Teruaki; Okude, Yoshitaka; Konishi, Sakuichi;  
Watanabe, Shoichi  
PA Nippon Paint K. K., Japan  
SO Jpn. Kokai Tokkyo Koho, 10 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 04063884	A2	19920228	JP 1990-175976	19900702
PRAI	JP 1990-175976		19900702		
AB	The title compns. having good storability and forming <b>coatings</b> with good solvent, acid, and alkali resistance contain carboxy anhydride group-containing compds., oxazolidine compds., alkoxysilyl group-containing polymers, <b>water</b> scavengers, and optionally epoxy compds. An acid anhydride group-containing polymer (I) was prepared from styrene 300, Bu acrylate 270, Bu methacrylate 210, and maleic anhydride 220 g; an alkoxysilyl and epoxy group-containing polymer (II) was prepared from glycidyl methacrylate 500, 3-methacryloyloxypropyltrimethoxysilane 220, and Bu methacrylate 280 g; and an oxazolidine compound (III) was prepared by condensing diisopropanolamine with isobutyraldehyde, then with dichlorodimethylsilane. A composition from I 100, II 59, III 29.4, trimethoxymethylsilane 6, and additive solution (from Tinuvin 900 28, Tinuvin 144 21, Sovlesso 150 185.1, and diethylene glycol Et ether acetate 92.6 g) 63.3 g was thinned with 1:1 BuOAc-xylene and was baked on a precoated steel plate at 140° for 30 min.				
IC	ICM C09D201-10				
	ICS C09D007-12; C09D201-02				
CC	42-10 ( <b>Coatings</b> , Inks, and Related Products)				
ST	acrylic <b>coating</b> oxazolidine <b>crosslinker</b> ; acid resistant acrylic <b>coating</b> ; alkali resistant acrylic <b>coating</b> ; solvent resistant acrylic <b>coating</b> ; alkoxysilyl acrylic <b>coating</b> ; epoxy acrylic <b>coating</b>				
IT	<b>Crosslinking</b> agents (oxazolidine derivs., for acrylic <b>coatings</b> )				
IT	Silanes RL: USES (Uses) ( <b>water</b> scavengers, in storable acrylic <b>coating</b> materials containing alkoxysilyl group-containing compds.)				
IT	<b>Coating</b> materials (alkali- and solvent-resistant, acid- and, acrylic, with oxazolidine <b>crosslinking</b> agents)				
IT	142913-92-6	142913-93-7	142913-94-8	142913-95-9	<b>142913-96-0</b>
	<b>142913-97-1</b>	142913-99-3	142914-00-9	142914-01-0	
	<b>142914-02-1</b>	142938-54-3			
	RL: TEM (Technical or engineered material use); USES (Uses) ( <b>coatings</b> , chemical-resistant)				
IT	59719-69-6P	133746-18-6P	142913-98-2P	142936-42-3P	
	RL: PREP (Preparation) (manufacture of, for <b>crosslinking</b> agents for acrylic <b>coatings</b> )				
IT	78-84-2, Isobutyraldehyde	100-52-7, Benzaldehyde,	reactions		
	RL: RCT (Reactant); RACT (Reactant or reagent) (reaction of, with diisopropanolamine)				
IT	75-78-5, Dichlorodimethylsilane	111-19-3, Decanedioyl dichloride			
	822-06-0				
	RL: RCT (Reactant); RACT (Reactant or reagent) (reaction of, with hydroxy oxazolidines)				
IT	108-18-9, Diisopropylamine				
	RL: RCT (Reactant); RACT (Reactant or reagent) (reaction of, with isobutyraldehyde)				
IT	681-84-5, Tetramethoxysilane	1185-55-3, Trimethoxymethylsilane			
	RL: USES (Uses) ( <b>water</b> scavengers, alkoxysilyl group-containing acrylic <b>coating</b> materials containing, with good storability)				

IT 142913-96-0 142913-97-1 142914-02-1

RL: TEM (Technical or engineered material use); USES (Uses)  
(coatings, chemical-resistant)

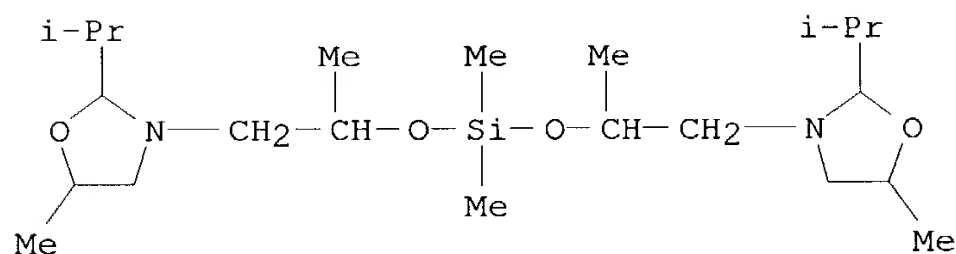
RN 142913-96-0 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, butyl ester, polymer with butyl 2-propenoate, 3,3'-[(dimethylsilylene)bis[oxy(2-methyl-2,1-ethanediyl)]]bis[5-methyl-2-(1-methylethyl)oxazolidine], ethenylbenzene, 2,5-furandione, 2,2'-[1,6-hexanediylbis(oxyethylene)]bis[oxirane], oxiranylmethyl 2-methyl-2-propenoate and 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 133746-18-6

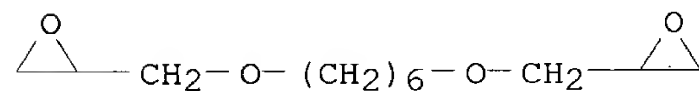
CMF C22 H46 N2 O4 Si



CM 2

CRN 16096-31-4

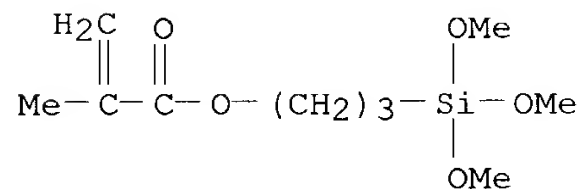
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CM 3

CRN 2530-85-0

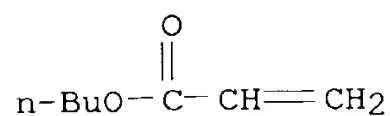
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CM 4

CRN 141-32-2

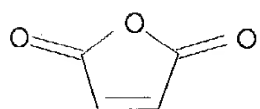
CMF C7 H12 O2



CM 5

CRN 108-31-6

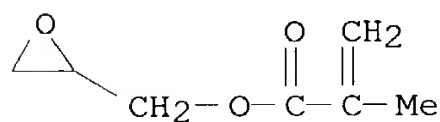
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CM 6

CRN 106-91-2

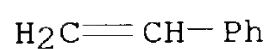
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CM 7

CRN 100-42-5

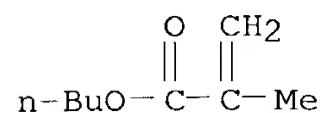
CMF C8 H8



CM 8

CRN 97-88-1

CMF C8 H14 O2



RN 142913-97-1 HCAPLUS

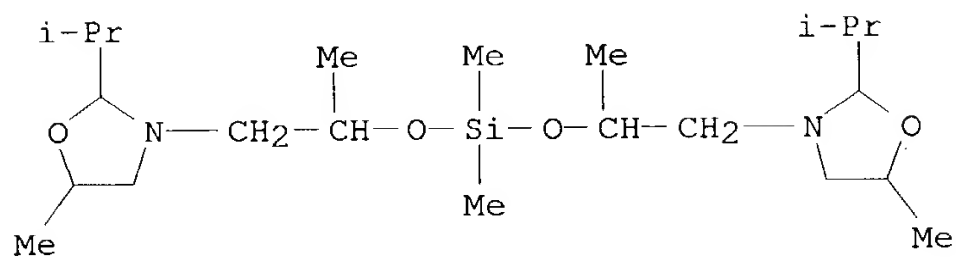
CN 7-Oxabicyclo[4.1.0]heptane-3-carboxylic acid, 7-oxabicyclo[4.1.0]hept-3-ylmethyl ester, polymer with 3,3'-[(dimethylsilylene)bis[oxy(2-methyl-2,1-ethanediy)]]]bis[5-methyl-2-(1-methylethyl)oxazolidine], ethenylbenzene, 2-ethylhexyl 2-methyl-2-propenoate, 2,5-furandione, 2-methylpropyl 2-methyl-2-propenoate and 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate

(9CI) (CA INDEX NAME)

CM 1

CRN 133746-18-6

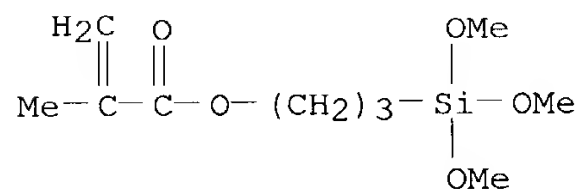
CMF C22 H46 N2 O4 Si



CM 2

CRN 2530-85-0

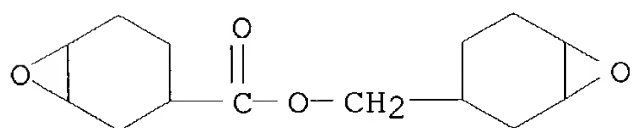
CMF C10 H20 O5 Si



CM 3

CRN 2386-87-0

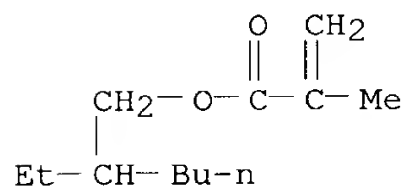
CMF C14 H20 O4



CM 4

CRN 688-84-6

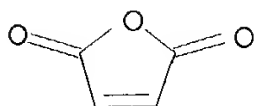
CMF C12 H22 O2





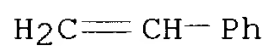
CM 5

CRN 108-31-6  
CMF C4 H2 O3



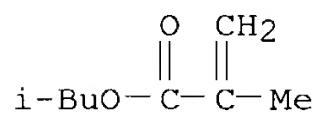
CM 6

CRN 100-42-5  
CMF C8 H8



CM 7

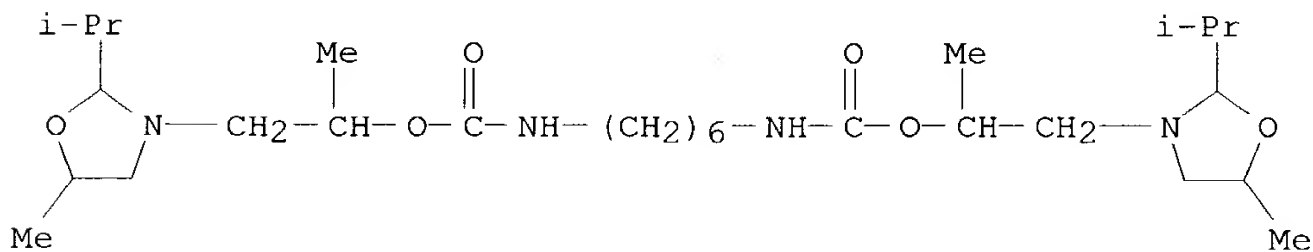
CRN 97-86-9  
CMF C8 H14 O2



RN 142914-02-1 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, butyl ester, polymer with  
bis[1-methyl-2-[5-methyl-2-(1-methylethyl)-3-oxazolidinyl]ethyl]  
1,6-hexanediylbis[carbamate], ethenylbenzene, 2-ethylhexyl  
2-methyl-2-propenoate, 2,5-furandione, 2-methylpropyl 2-methyl-2-  
propenoate, oxiranylmethyl 2-methyl-2-propenoate and 3-  
(trimethoxysilyl)propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

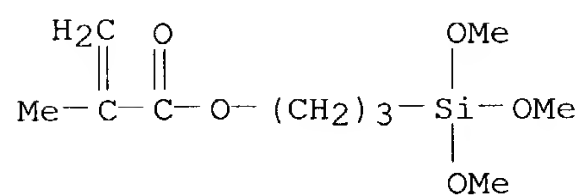
CRN 59719-69-6  
CMF C28 H54 N4 O6



CM 2

CRN 2530-85-0

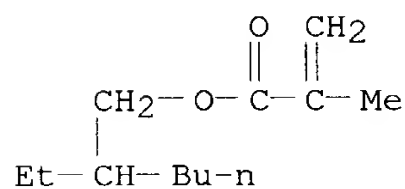
CMF C10 H20 O5 Si



CM 3

CRN 688-84-6

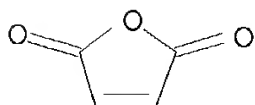
CMF C12 H22 O2



CM 4

CRN 108-31-6

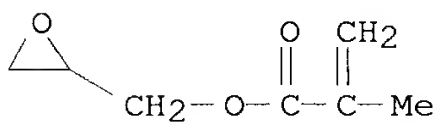
CMF C4 H2 O3



CM 5

CRN 106-91-2

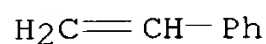
CMF C7 H10 O3



CM 6

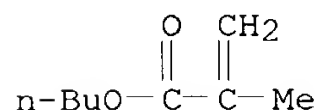
CRN 100-42-5

CMF C8 H8



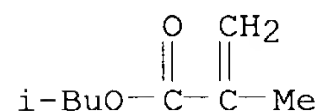
CM 7

CRN 97-88-1  
CMF C8 H14 O2



CM 8

CRN 97-86-9  
CMF C8 H14 O2



L56 ANSWER 31 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN  
AN 1992:428811 HCAPLUS  
DN 117:28811  
TI Manufacture of multilayer **coatings** using **epoxy** resins  
and **polyesters**  
IN Kasukawa, Takahisa; Katayama, Teiji; Tabuchi, Ichiro; Morino, Mitsuharu;  
Inoue, Hiroshi; Ohkoshi, Toshio  
PA Kansai Paint Co., Ltd., Japan  
SO Ger. Offen., 28 pp.  
CODEN: GWXXBX  
DT Patent  
LA German  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 4126476	A1	19920213	DE 1991-4126476	19910809
	DE 4126476	C2	19991104		
	JP 04094773	A2	19920326	JP 1990-212301	19900809
	JP 2989643	B2	19991213		
	GB 2249496	A1	19920513	GB 1991-17021	19910807
	GB 2249496	B2	19941012		
	US 5229210	A	19930720	US 1991-742420	19910808
	US 5328579	A	19940712	US 1993-970021	19930125
PRAI	JP 1990-212301		19900809		
	US 1991-742420		19910808		
AB	Glossy, <b>water-</b> and chip-resistant, multilayer <b>coatings</b> are prepared by electrodepositing a cationic resin, heating the <b>coating</b> until $\leq 10\%$ weight loss occurs, overcoating with an <b>aqueous</b> composition containing a <b>polyester</b> (optionally modified with a urethane; acid number 10-100; OH number 20-300) and a <b>water</b>				

-thinnable amino resin, and thermally hardening the 2 layers. Thus, a bath (20% solids) bath containing diethanolamine-modified Epikote 1004, EHPE 3150 [Poly(4-vinylcyclohexene **diepoxide**)], HCO<sub>2</sub>H, Pb octanoate, and pigment was electrophoretically deposited on a steel plate, dried 10 min at 100°, oversprayed with an **aqueous** composition containing ethylene glycol-phthalic anhydride-TDI-trimellitic anhydride-trimethylolpropane copolymer, Cymel 703, benzoin Et ether, pigment, and EtO(CH<sub>2</sub>CH<sub>2</sub>O)<sub>2</sub>H, aged 5 min, heated 30 min at 160°, and topcoated with a thermosetting **polyester** paint.

- IC ICM B05D001-38
- ICS B05D003-02; B05D003-10; C25D013-06; C25D013-10; C09D005-44;  
C09D167-00; C09D161-20; C09D175-04; C09D163-00
- ICI C09D167-00, C09D161-20
- CC 42-2 (**Coatings**, Inks, and Related Products)
- ST chip resistance multilayer **coating**; **water** resistance  
multilayer **coating**; gloss multilayer **coating**;  
**epoxy** cationic multilayer **coating**; amine **epoxy**  
multilayer **coating**; ethanolamine **epoxy** electrophoretic  
**coating**; polyvinylcyclohexene dioxide electrophoretic  
**coating**; **polyester** aminoplast **waterborne**  
**coating**; **polyurethane polyester**  
**waterborne coating**; phthalate **polyester**  
polyurethane **coating**; trimethylolpropane **polyester**  
polyurethane **coating**; TDI **polyester** polyurethane  
**coating**; trimellitate **polyester** polyurethane  
**coating**
- IT **Polyesters**, uses  
RL: USES (Uses)  
(electrophoretic primers containing, for multilayer **coatings**)
- IT **Crosslinking** agents  
(for aminated **epoxy** resin primers, in **polyester**  
multilayer **coatings**)
- IT **Epoxy** resins, compounds  
RL: USES (Uses)  
(amino-containing, electrophoretic primers, for **polyester**  
multilayer **coatings**)
- IT **Coating** materials  
(chip- and **water**-resistant, multilayer, **water**  
-thinned, **polyesters** and **epoxy** resins in)
- IT **Coating** process  
(multilayer, with **aqueous** aminated **epoxy** resin compns.  
and **aqueous polyester** compns.)
- IT Urethane polymers, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(**polyester**-, **coatings**, chip- and **water**  
-resistant, on electrophoretic primers)
- IT Electrodeposits and Electroplates  
(primers, cationic **epoxy** resin, in **polyester**  
multilayer **coatings**)
- IT **142146-50-7 142146-51-8 142146-52-9**  
RL: USES (Uses)  
(**coatings** containing melamine resin and, **crosslinked**,  
chip- and **water**-resistant)
- IT **142146-53-0 142146-54-1 142171-46-8**  
RL: TEM (Technical or engineered material use); USES (Uses)  
(**coatings**, chip- and **water**-resistant, on cationic  
electrophoretic primers)
- IT 96-29-7D, Methyl ethyl ketoxime, reaction products with diisocyanates

4098-71-9D, reaction products with Me Et ketoxime 25086-25-3, EHPE 3150  
 25854-16-4D, reaction products with Me Et ketoxime  
 RL: USES (Uses)

(**crosslinkers**, for aminated **epoxy** resin in  
 electrophoretic primer)

IT 77-73-6D, Cyclopentadiene dimer, **epoxidized**, reaction products  
 with **epoxidized** vinylcyclohexene and trimethylolpropane  
 77-99-6D, reaction products with **epoxidized** limonene 78-10-4D,  
 reaction products with cyclohexane **diepoxide** derivs. and  
**water** 100-40-3D, 4-Vinylcyclohexene, **epoxidized**,  
 reaction products with **epoxidized** cyclopentadiene dimer and  
 trimethylolpropane 138-86-3D, Limonene, **epoxidized**, reaction  
 products with trimethylolpropane 7732-18-5D, **Water**, reaction  
 products with cyclohexane **diepoxide** derivs. and  
 tetraethoxysilane 29616-43-1D, reaction products with tetraethoxysilane  
 and **water** 128703-08-2 128703-09-3 142298-02-0D,  
**epoxidized** 142298-08-6D, **epoxidized**  
 RL: USES (Uses)

(**crosslinkers**, for aminated **epoxy** resin in  
 electrophoretic primers)

IT 104-40-5D, p-Nonylphenol, reaction products with **epoxy** resins  
 and polycaprolactone diol and amines 24980-41-4D, Caprolactone  
 homopolymer, diols, reaction products with **epoxy** resins and  
 nonylphenol and amines 25248-42-4D, Poly[oxy(1-oxo-1,6-hexanediyl)],  
 diols, reaction products with **epoxy** resins and nonylphenol and  
 amines 32781-30-9D, reaction products with **epoxy** resins and  
 polycaprolactone diol 94188-96-2D, Placel 205, reaction products with  
**epoxy** resins and nonylphenol and amines 109489-28-3D, Araldite  
 GY 2600, reaction products with polycaprolactone diol and nonylphenol and  
 amines  
 RL: USES (Uses)

(electrophoretic primers containing blocked diisocyanates and, for  
**polyester coatings**)

IT 109-83-1DP, N-Methylaminoethanol, reaction products with **epoxy**  
 resins and **dimethylaminopropylacrylamide**-ethanolamine adduct and  
 diethanolamine 111-42-2DP, reaction products with **epoxy** resins  
 141-43-5DP, reaction products with **epoxy** resins and  
 (dimethylaminopropyl)**acrylamide** 25068-38-6DP, Epikote 1004,  
 aminated 66171-89-9DP, reaction products with ethanolamine and  
**epoxy** resins 142146-48-3DP, aminated 142146-49-4DP, aminated  
 RL: PREP (Preparation)

(manufacture of, for electrophoretic primers in multilayer **coatings**  
 )

IT **142146-50-7 142146-51-8 142146-52-9**  
 RL: USES (Uses)

(**coatings** containing melamine resin and, **crosslinked**,  
 chip- and **water**-resistant)

RN 142146-50-7 HCAPLUS

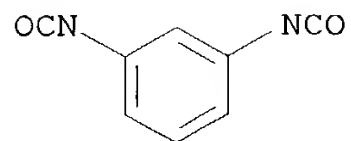
CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, polymer with  
 1,3-diisocyanatomethylbenzene, 1,2-ethanediol, 2-ethyl-2-(hydroxymethyl)-  
 1,3-propanediol and 1,3-isobenzofurandione (9CI) (CA INDEX NAME)

CM 1

CRN 26471-62-5

CMF C9 H6 N2 O2

CCI IDS

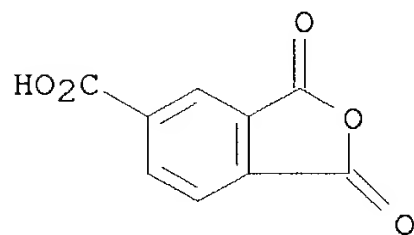


D1-Me

CM 2

CRN 552-30-7

CMF C9 H4 O5



CM 3

CRN 107-21-1

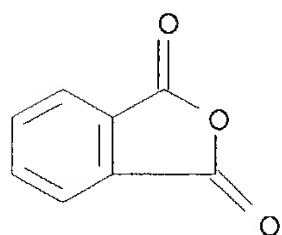
CMF C2 H6 O2

HO-CH<sub>2</sub>-CH<sub>2</sub>-OH

CM 4

CRN 85-44-9

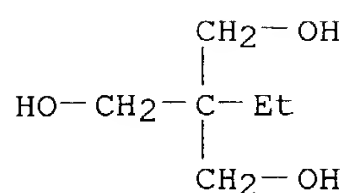
CMF C8 H4 O3



CM 5

CRN 77-99-6

CMF C6 H14 O3



RN 142146-51-8 HCAPLUS

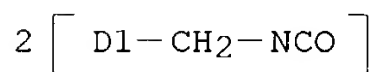
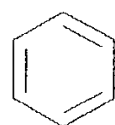
CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, polymer with bis(isocyanatomethyl)benzene, 1,2-ethanediol, 2-ethyl-2-(hydroxymethyl)-1,3-propanediol and 1,3-isobenzofurandione (9CI) (CA INDEX NAME)

CM 1

CRN 25854-16-4

CMF C10 H8 N2 O2

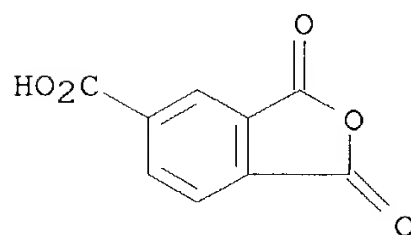
CCI IDS



CM 2

CRN 552-30-7

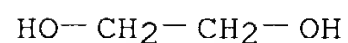
CMF C9 H4 O5



CM 3

CRN 107-21-1

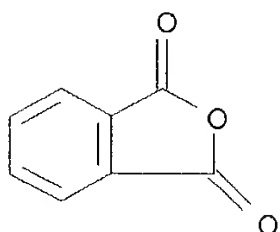
CMF C2 H6 O2



CM 4

CRN 85-44-9

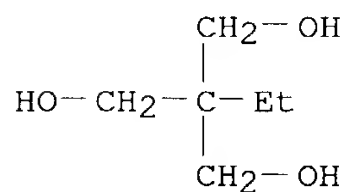
CMF C8 H4 O3



CM 5

CRN 77-99-6

CMF C6 H14 O3



RN 142146-52-9 HCAPLUS

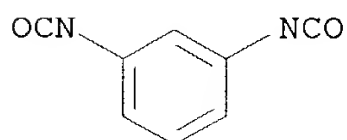
CN 1,3-Isobenzofurandione, polymer with 1,3-diisocyanatomethylbenzene, 1,2-ethanediol and 1,2,3-propanetriol (9CI) (CA INDEX NAME)

CM 1

CRN 26471-62-5

CMF C9 H6 N2 O2

CCI IDS

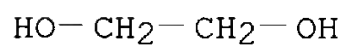


D1-Me

CM 2

CRN 107-21-1

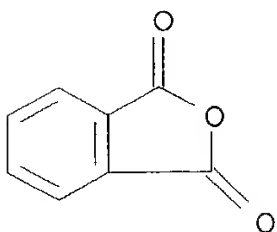
CMF C2 H6 O2



CM 3

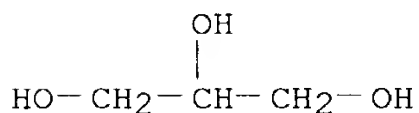


CRN 85-44-9  
CMF C8 H4 O3



CM 4

CRN 56-81-5  
CMF C3 H8 O3



IT 142146-53-0 142146-54-1 142171-46-8

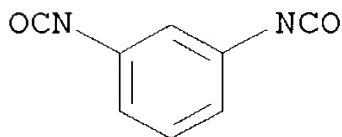
RL: TEM (Technical or engineered material use); USES (Uses)  
(**coatings**, chip- and **water**-resistant, on cationic  
electrophoretic primers)

RN 142146-53-0 HCAPLUS

CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, polymer with  
1,3-diisocyanatomethylbenzene, 1,2-ethanediol, 2-ethyl-2-(hydroxymethyl)-  
1,3-propanediol, formaldehyde, 1,3-isobenzofurandione and  
1,3,5-triazine-2,4,6-triamine (9CI) (CA INDEX NAME)

CM 1

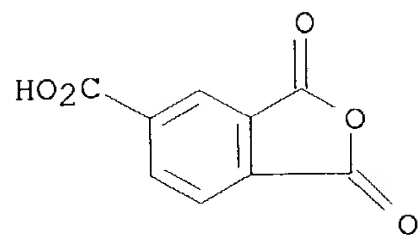
CRN 26471-62-5  
CMF C9 H6 N2 O2  
CCI IDS



D1-Me

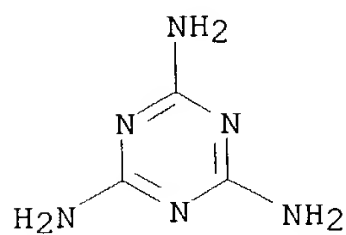
CM 2

CRN 552-30-7  
CMF C9 H4 O5



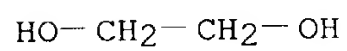
CM 3

CRN 108-78-1  
CMF C3 H6 N6



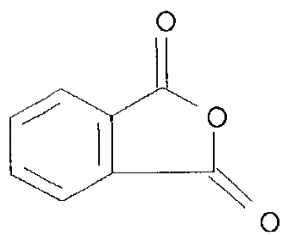
CM 4

CRN 107-21-1  
CMF C2 H6 O2



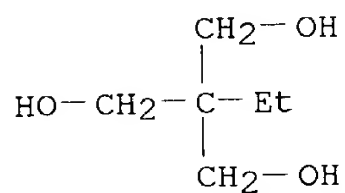
CM 5

CRN 85-44-9  
CMF C8 H4 O3



CM 6

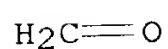
CRN 77-99-6  
CMF C6 H4 O3



CM 7

CRN 50-00-0

CMF C H2 O



RN 142146-54-1 HCAPLUS

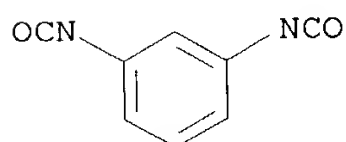
CN Formaldehyde, polymer with 1,3-diisocyanatomethylbenzene, 1,2-ethanediol, 1,3-isobenzofurandione, 1,2,3-propanetriol and 1,3,5-triazine-2,4,6-triamine (9CI) (CA INDEX NAME)

CM 1

CRN 26471-62-5

CMF C9 H6 N2 O2

CCI IDS

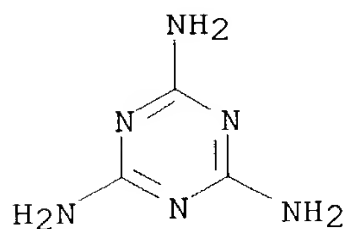


D1-Me

CM 2

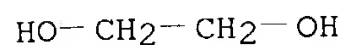
CRN 108-78-1

CMF C3 H6 N6



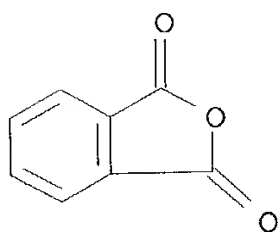
CM 3

CRN 107-21-1  
CMF C2 H6 O2



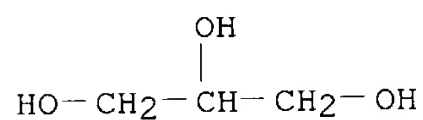
CM 4

CRN 85-44-9  
CMF C8 H4 O3



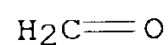
CM 5

CRN 56-81-5  
CMF C3 H8 O3



CM 6

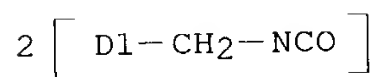
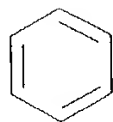
CRN 50-00-0  
CMF C H2 O



RN 142171-46-8 HCAPLUS  
CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, polymer with bis(isocyanatomethyl)benzene, 1,2-ethanediol, 2-ethyl-2-(hydroxymethyl)-1,3-propanediol, formaldehyde, 1,3-isobenzofurandione and 1,3,5-triazine-2,4,6-triamine (9CI) (CA INDEX NAME)

CM 1

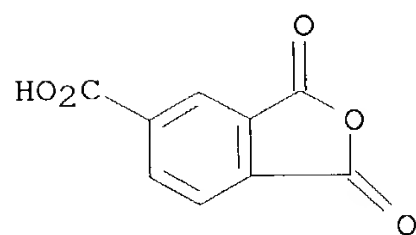
CRN 25854-16-4  
CMF C10 H8 N2 O2  
CCI IDS



CM 2

CRN 552-30-7

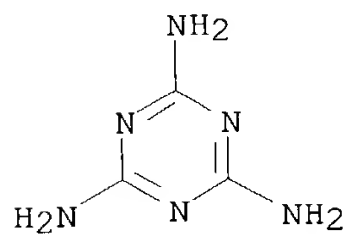
CMF C9 H4 O5



CM 3

CRN 108-78-1

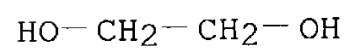
CMF C3 H6 N6



CM 4

CRN 107-21-1

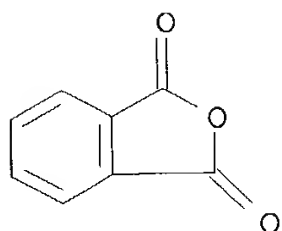
CMF C2 H6 O2



CM 5

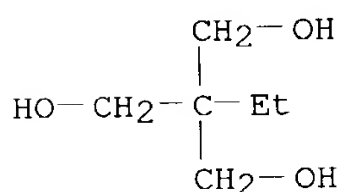
CRN 85-44-9

CMF C8 H4 O3



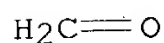
CM 6

CRN 77-99-6  
CMF C6 H14 O3



CM 7

CRN 50-00-0  
CMF C H2 O



L56 ANSWER 32 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN  
AN 1992:237457 HCAPLUS  
DN 116:237457  
TI Cationic electrophoretic **coatings** and topcoats  
IN Katayama, Teiji; Nagaoka, Jiro; Isozaki, Osamu; Nakai, Noboru  
PA Kansai Paint Co., Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 59 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 03254868	A2	19911113	JP 1990-50654	19900301
PRAI	JP 1990-50654		19900301		
AB	Cationic electrophoretic <b>coating</b> compns. contain cationic polymers bearing OH groups and epoxy resins, and the topcoating compns. contain polymers bearing hydroxysilyl and/or hydrolyzable groups. Thus, an electrophoretic <b>coating</b> composition contained a reaction product (68% solids) of 1900 parts Epikote 1004 with 210 parts diethanolamine 88, crosslinking resin (80% solids) 37.5, 10% HCO2H 29, Pb compound 2.6, and <b>H2O</b> 293 parts. A topcoating composition contained 20:30:10:10:30 hydroxyethyl acrylate-(3,4-epoxycyclohexyl)methyl acrylate-CH2:CMcO2C3H6Si(OMe)3-Bu methacrylate polymer.				
IC	ICM B05D007-24				

ICS B05D001-36; B05D007-14; C09D005-44; C09D163-00; C25D013-00

CC 42-7 (**Coatings**, Inks, and Related Products)  
Section cross-reference(s): 55

ST cationic electrophoretic **coating**; epoxy resin aminated  
**coating**; epoxycyclohexylmethyl acrylate copolymer **coating**  
; methacrylate copolymer **coating**; silane deriv polymer  
**coating**

IT Galvanized iron and steel  
RL: USES (Uses)  
(cationic electrophoretic primers and topcoats for)

IT **Crosslinking** agents  
(epoxy resins, for cationic electrophoretic **coatings**)

IT Epoxy resins, compounds  
RL: USES (Uses)  
(amino-containing, cationic electrophoretic **coatings**)

IT Electrodeposits and Electroplates  
(primers, for steel)

IT **Coating** materials  
(topcoats, on cathodic electrophoretic primers)

IT 108-10-1D, MIBK, reaction products with polyamines and epoxy resins  
109-89-7D, Diethylamine, reaction products with MIBK and epoxy resins  
111-40-0D, reaction products with MIBK and epoxy resins 111-42-2D,  
reaction products with epoxy resins 141-43-5D, Monoethanolamine,  
reaction products with epoxy resins 1675-54-3D, reaction products with  
amines 3845-76-9D, N,N-Dimethylaminopropyl acrylamide, reaction products  
with epoxy resins 25068-38-6D, Epikote 1004, reaction products with  
diethanolamine 99264-56-9D, Propylene glycol glycidyl ether, reaction  
products with amines 128771-71-1D, XB-4122, aminated  
RL: USES (Uses)  
(cationic electrophoretic **coatings**)

IT 106-86-5D, reaction products with dicyclopentadiene oxide and triols  
25086-25-3, EHPE 3150 29616-43-1, Celloxide 3000 140197-46-2D,  
epoxidized 140197-47-3 140197-48-4 140197-49-5 140222-54-4D,  
reaction products with trimethylolpropane and vinylcyclohexene oxide  
140387-35-5  
RL: MOA (Modifier or additive use); USES (Uses)  
(**crosslinking** agents, for cationic electrophoretic  
**coatings**)

IT 140197-54-2 140197-55-3  
RL: USES (Uses)  
(dispersions, for **coating** materials)

IT 767-11-3D, 7-Oxabicyclo[4.1.0]heptane-3-methanol, polymers with  
isocyanates and silanes 17865-05-3D, reaction products with hydroxylated  
polymers 51473-59-7D, reaction products with carboxylic acids  
64385-78-0 88795-12-4 123894-00-8 132614-18-7 140197-50-8  
140197-51-9 140197-52-0 140197-53-1 **140197-56-4**  
**140197-57-5** 140197-58-6 140197-59-7 140197-60-0  
**140197-61-1 140197-62-2** 140197-63-3  
**140409-42-3** 141433-64-9 141433-65-0  
RL: TEM (Technical or engineered material use); USES (Uses)  
(topcoats, for electrophoretic primers)

IT **140197-56-4 140197-57-5 140197-61-1**  
**140197-62-2 140409-42-3**  
RL: TEM (Technical or engineered material use); USES (Uses)  
(topcoats, for electrophoretic primers)

RN 140197-56-4 HCAPLUS

CN 7-Oxabicyclo[4.1.0]heptane-3-carboxylic acid, 7-oxabicyclo[4.1.0]hept-3-  
ylmethyl ester, polymer with butyl 2-methyl-2-propenoate, ethenylbenzene,

2-hydroxyethyl 2-methyl-2-propenoate, oxiranylmethyl 2-methyl-2-propenoate, Sumidur N and triethoxyphenylsilane (9CI) (CA INDEX NAME)

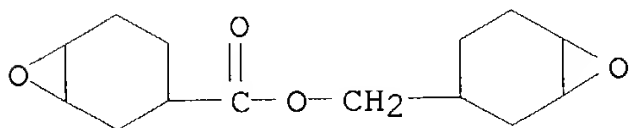
CM 1

CRN 81210-14-2  
CMF Unspecified  
CCI MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

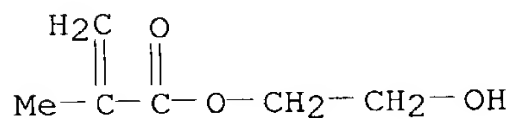
CM 2

CRN 2386-87-0  
CMF C14 H20 O4



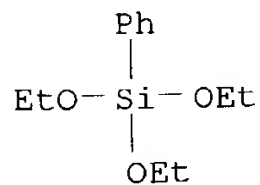
CM 3

CRN 868-77-9  
CMF C6 H10 O3



CM 4

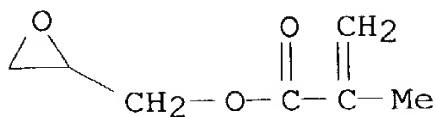
CRN 780-69-8  
CMF C12 H20 O3 Si



CM 5

CRN 106-91-2  
CMF C7 H10 O3

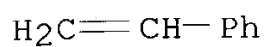




CM 6

CRN 100-42-5

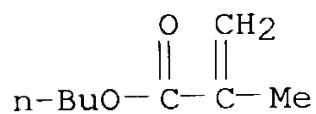
CMF C8 H8



CM 7

CRN 97-88-1

CMF C8 H14 O2



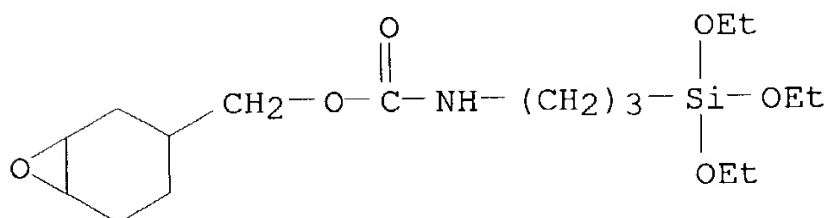
RN 140197-57-5 HCAPLUS

CN 7-Oxabicyclo[4.1.0]heptane-3-carboxylic acid, 7-oxabicyclo[4.1.0]hept-3-ylmethyl ester, polymer with butyl 2-methyl-2-propenoate, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl 2-propenoate,  $\alpha$ -[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl]- $\omega$ -hydroxypoly[oxy(1-oxo-1,6-hexanediyl)], 7-oxabicyclo[4.1.0]hept-3-ylmethyl [3-(triethoxysilyl)propyl]carbamate, phenylsilanetriol, Sumidur N and 3-(trimethoxysilyl)propyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 132808-40-3

CMF C17 H33 N O6 Si

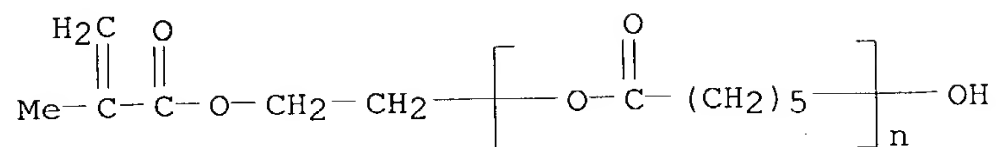


CM 2

CRN 81984-60-3

CMF (C6 H10 O2)<sub>n</sub> C6 H10 O3

CCI PMS



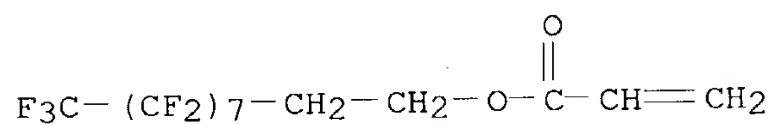
CM 3

CRN 81210-14-2  
CMF Unspecified  
CCI MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

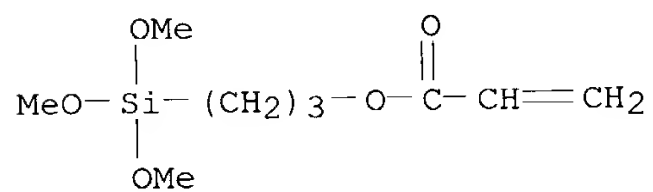
CM 4

CRN 27905-45-9  
CMF C13 H7 F17 O2



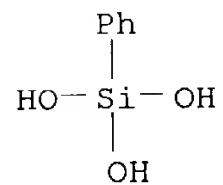
CM 5

CRN 4369-14-6  
CMF C9 H18 O5 Si



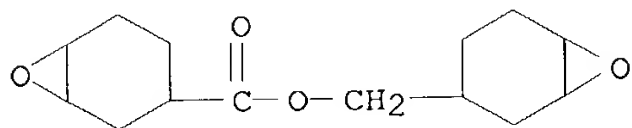
CM 6

CRN 3047-74-3  
CMF C6 H8 O3 Si



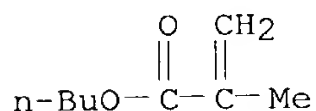
CM 7

CRN 2386-87-0  
CMF C14 H20 O4



CM 8

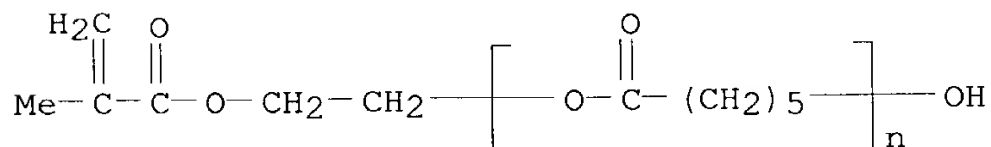
CRN 97-88-1  
CMF C8 H14 O2



RN 140197-61-1 HCAPLUS  
CN 7-Oxabicyclo[4.1.0]heptane-3-carboxylic acid, 7-oxabicyclo[4.1.0]hept-3-ylmethyl ester, polymer with butyl 2-methyl-2-propenoate, chlorotrifluoroethene, ethenyl acetate, ethenyl butanoate, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl 2-propenoate,  $\alpha$ -[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl]- $\omega$ -hydroxypoly[oxy(1-oxo-1,6-hexanediyl)], phenylsilanetriol, Sumidur N and 3-(trimethoxysilyl)propyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 81984-60-3  
CMF (C6 H10 O2)<sub>n</sub> C6 H10 O3  
CCI PMS



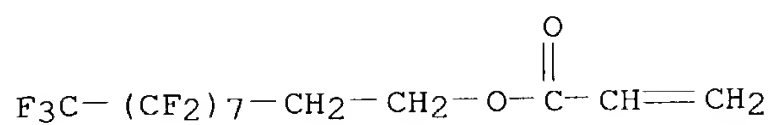
CM 2

CRN 81210-14-2  
CMF Unspecified  
CCI MAN

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CM 3

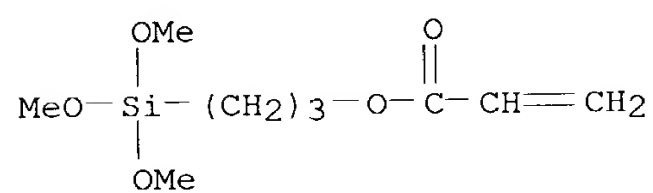
CRN 27905-45-9  
CMF C13 H7 F17 O2



CM 4

CRN 4369-14-6

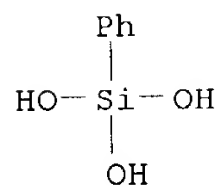
CMF C9 H18 O5 Si



CM 5

CRN 3047-74-3

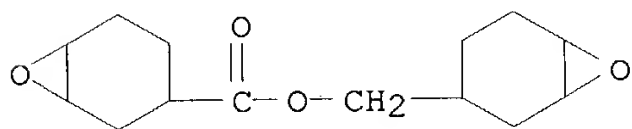
CMF C6 H8 O3 Si



CM 6

CRN 2386-87-0

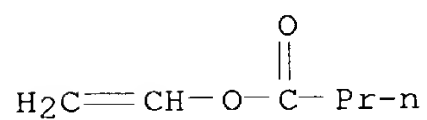
CMF C14 H20 O4



CM 7

CRN 123-20-6

CMF C6 H10 O2



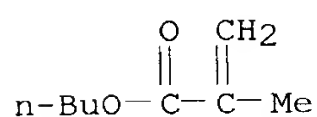
CM 8

CRN 108-05-4  
CMF C4 H6 O2



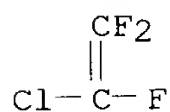
CM 9

CRN 97-88-1  
CMF C8 H14 O2



CM 10

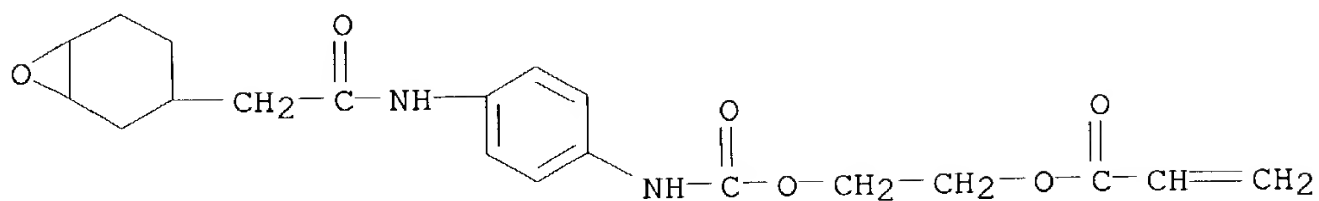
CRN 79-38-9  
CMF C2 Cl F3



RN 140197-62-2 HCAPLUS  
CN 7-Oxabicyclo[4.1.0]heptane-3-carboxylic acid, 7-oxabicyclo[4.1.0]hept-3-ylmethyl ester, polymer with butyl 2-methyl-2-propenoate, 1,4-diethenylbenzene, ethenylbenzene, 2-hydroxyethyl 2-methyl-2-propenoate, 2-hydroxyethyl 2-propenoate, methyl 2-methyl-2-propenoate, 2-[[[4-[(7-oxabicyclo[4.1.0]hept-3-ylacetyl)amino]phenyl]amino]carbonyl]oxy]ethyl 2-propenoate, 7-oxabicyclo[4.1.0]hept-3-ylmethyl 2-methyl-2-propenoate, 7-oxabicyclo[4.1.0]hept-3-ylmethyl 2-propenoate, 2-propenenitrile, Sumidur N, triethoxyphenylsilane and 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

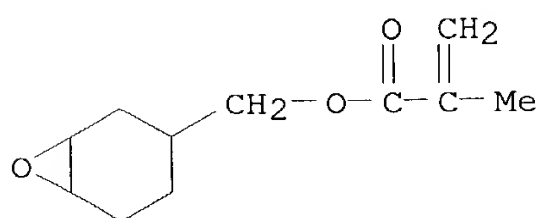
CM 1

CRN 131718-53-1  
CMF C20 H24 N2 O6



CM 2

CRN 82428-30-6  
CMF C11 H16 O3



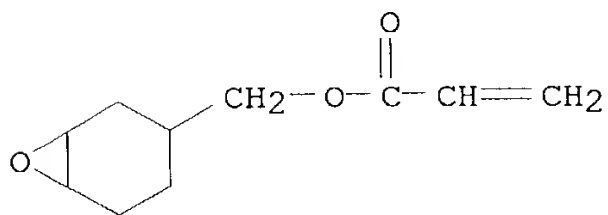
CM 3

CRN 81210-14-2  
CMF Unspecified  
CCI MAN

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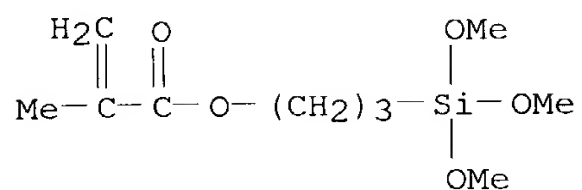
CM 4

CRN 64630-63-3  
CMF C10 H14 O3



CM 5

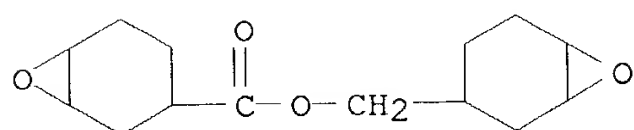
CRN 2530-85-0  
CMF C10 H20 O5 Si



CM 6

CRN 2386-87-0

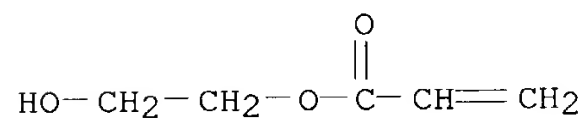
CMF C14 H20 O4



CM 7

CRN 818-61-1

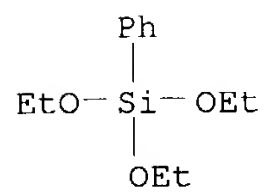
CMF C5 H8 O3



CM 8

CRN 780-69-8

CMF C12 H20 O3 Si



CM 9

CRN 107-13-1

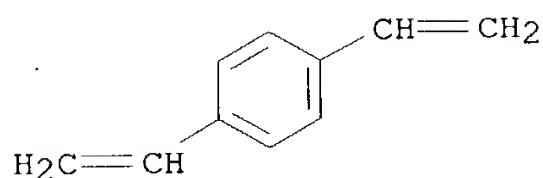
CMF C3 H3 N



CM 10

CRN 105-06-6

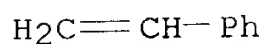
CMF C10 H10



CM 11

CRN 100-42-5

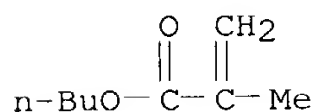
CMF C8 H8



CM 12

CRN 97-88-1

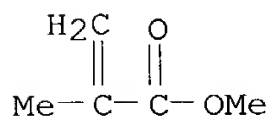
CMF C8 H14 O2



CM 13

CRN 80-62-6

CMF C5 H8 O2



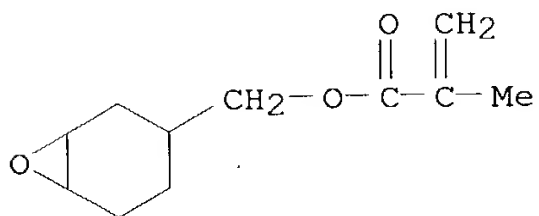
RN 140409-42-3 HCAPLUS

CN Hexanedioic acid, polymer with 1,4-diethenylbenzene, 2,2-dimethyl-1,3-propanediol, ethenylbenzene, 2-ethyl-2-(hydroxymethyl)-1,3-propanediol, hexahydro-1,3-isobenzofurandione, 2-hydroxyethyl 2-methyl-2-propenoate, 1,3-isobenzofurandione, methyl 2-methyl-2-propenoate, 7-oxabicyclo[4.1.0]hept-3-ylmethyl 2-methyl-2-propenoate, 7-oxabicyclo[4.1.0]hept-3-ylmethyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate, 2-propenenitrile and Sumidur N (9CI) (CA INDEX NAME)

CM 1



CRN 82428-30-6  
CMF C11 H16 O3



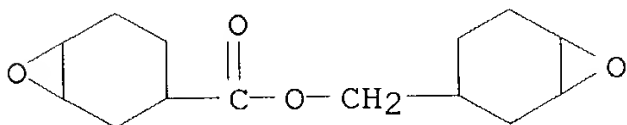
CM 2

CRN 81210-14-2  
CMF Unspecified  
CCI MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

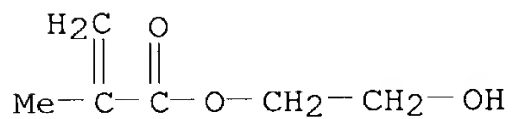
CM 3

CRN 2386-87-0  
CMF C14 H20 O4



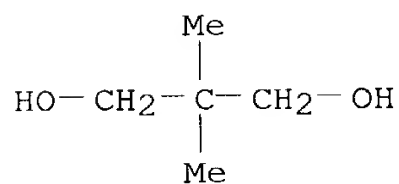
CM 4

CRN 868-77-9  
CMF C6 H10 O3



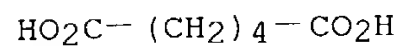
CM 5

CRN 126-30-7  
CMF C5 H12 O2



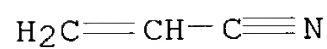
CM 6

CRN 124-04-9  
CMF C6 H10 O4



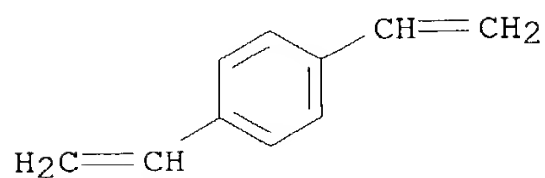
CM 7

CRN 107-13-1  
CMF C3 H3 N



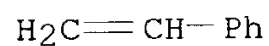
CM 8

CRN 105-06-6  
CMF C10 H10



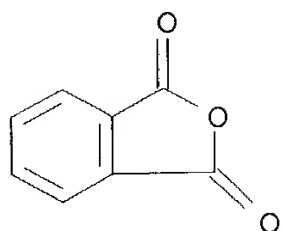
CM 9

CRN 100-42-5  
CMF C8 H8



CM 10

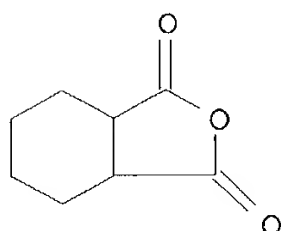
CRN 85-44-9  
CMF C8 H4 O3



CM 11

CRN 85-42-7

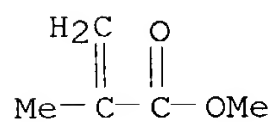
CMF C8 H10 O3



CM 12

CRN 80-62-6

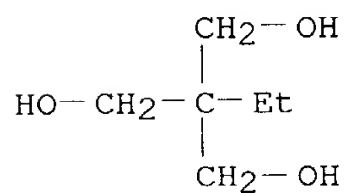
CMF C5 H8 O2



CM 13

CRN 77-99-6

CMF C6 H14 O3



L56 ANSWER 33 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1991:634834 HCAPLUS

DN 115:234834

TI Organic boron compound-containing resin compositions as **coatings**  
for optical disks

IN Shimura, Katsunori; Matsumoto, Kanichi; Yokoshima, Minoru

PA Nippon Kayaku Co., Ltd., Japan

KATHLEEN FULLER EIC 1700 REMSEN 4B28 571/272-2505

SO Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 03054214	A2	19910308	JP 1989-188717	19890724
PRAI	JP 1989-188717		19890724		
AB	UV-curable title compns., useful as antistatic <b>coatings</b> for optical disks, comprise organic B compds., unsatd. compds., and optionally photoinitiators. A polycarbonate optical disk was coated with a mixture of FA 513A 30, Kayarad R 684 (tricyclodecanedimethanol diacrylate) 55, XP 7000B 10, Irgacure 184 5, and Hi-Boron LB 120 10 parts and photocured to give a <b>coating</b> showing no change after 1000 h at 60° and 90% relative humidity and surface resistance 5.5 + 10 <sup>10</sup> Ω, vs. no change and 2.5 + 10 <sup>15</sup> , resp., without Hi-Boron LB 120.				
IC	ICM C08F299-04				
	ICS G11B007-24				
CC	42-10 ( <b>Coatings</b> , Inks, and Related Products) Section cross-reference(s): 74				
ST	<b>crosslinking</b> photochem antistatic <b>coating</b> ; photocuring antistatic <b>coating</b> optical; antistatic <b>coating</b> optical disk; boron compd antistatic <b>coating</b> ; acrylic antistatic <b>coating</b> optical; <b>water</b> resistance antistatic <b>coating</b> ; polycarbonate optical disk antistatic				
IT	Antistatic agents (boron compds., <b>coatings</b> containing, for optical disks)				
IT	<b>Coating</b> materials (antistatic, UV-curable, acrylic, containing organic boron compds., for optical disks)				
IT	Recording apparatus (optical disks, antistatic <b>coatings</b> for, organic boron compound-containing)				
IT	Memory devices (optical, disks, antistatic <b>coatings</b> for, organic boron compound-containing)				
IT	Acoustic devices (records, compact, antistatic <b>coatings</b> for, organic boron compound-containing)				
IT	126040-14-0, Hi-Boron CTN 131 126040-15-1, Hi-Boron CTP 200 137087-36-6, Hi-Boron LB 120 RL: USES (Uses) (antistatic agents, acrylic <b>coatings</b> containing, for optical disks)				
IT	<b>137049-55-9 137252-88-1 137252-89-2</b> RL: USES (Uses) (antistatic <b>coating</b> containing organic boron compound and, for optical disk)				
IT	<b>137049-55-9 137252-88-1 137252-89-2</b> RL: USES (Uses) (antistatic <b>coating</b> containing organic boron compound and, for optical disk)				
RN	137049-55-9 HCAPLUS				
CN	2-Propenoic acid, 2,2-dimethyl-1,3-propanediyl ester, polymer with 2-ethyl-2-[[ (1-oxo-2-propenyl)oxy]ethyl]-1,3-propanediyl di-2-propenoate, 2-hydroxy-2,2-dimethylpropanoic acid, 2,2'-[oxybis(methylene)]bis[2-(hydroxymethyl)-1,3-propanediol] 2-propenoate and Shikoh UV 7000B (9CI)				

(CA INDEX NAME)

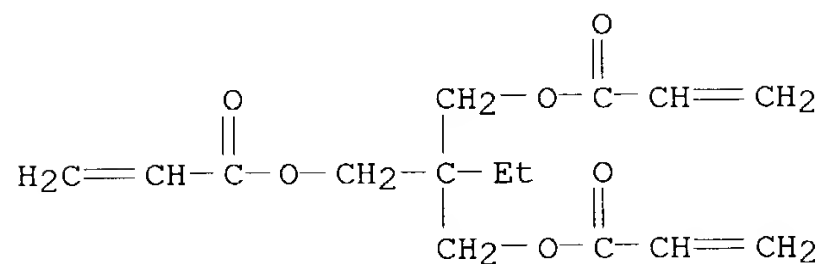
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CRN 82116-59-4  
CMF Unspecified  
CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

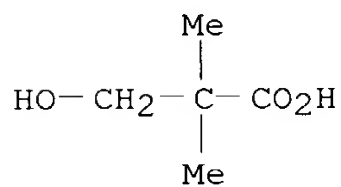
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CRN 15625-89-5  
CMF C15 H20 O6



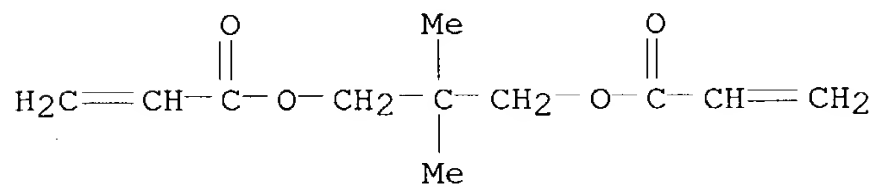
CM 3

CRN 4835-90-9  
CMF C5 H10 O3



CM 4

CRN 2223-82-7  
CMF C11 H16 O4

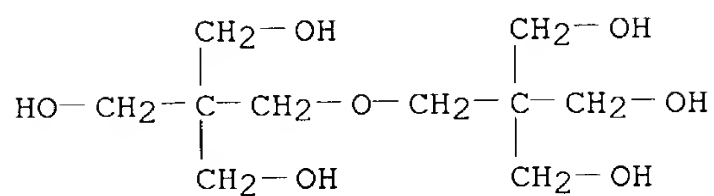


CM 5

CRN 77641-99-7  
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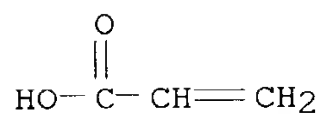
CM 6

CRN 126-58-9  
CMF C10 H22 O7



CM 7

CRN 79-10-7  
CMF C3 H4 O2



RN 137252-88-1 HCAPLUS  
CN 2-Propenoic acid, (octahydro-4,7-methano-1H-indene-5,?-diyl)bis(methylene) ester, polymer with octahydro-4,7-methano-1H-inden-5-yl 2-propenoate and Shikoh UV 7000B (9CI) (CA INDEX NAME)

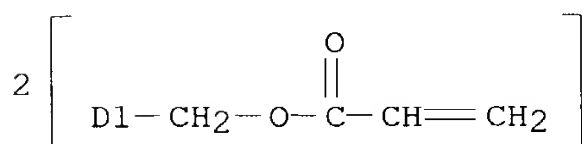
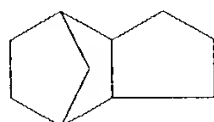
CM 1

CRN 82116-59-4  
CMF Unspecified  
CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 2

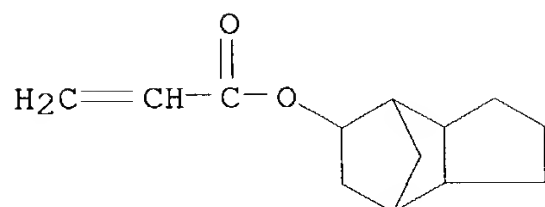
CRN 42594-17-2  
CMF C18 H24 O4  
CCI IDS



CM 3

CRN 7398-56-3

CMF C13 H18 O2



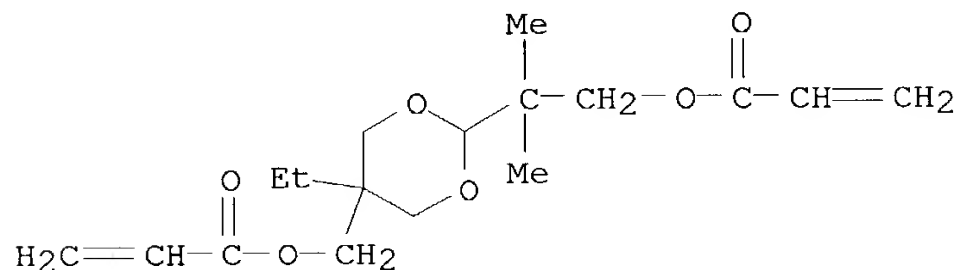
RN 137252-89-2 HCAPLUS

CN 2-Propenoic acid, 2,2-bis[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl ester, polymer with (chloromethyl)oxirane polymer with 4,4'-(1-methylethylidene)bis[phenol] 2-propenoate, [2-[1,1-dimethyl-2-[(1-oxo-2-propenyl)oxy]ethyl]-5-ethyl-1,3-dioxan-5-yl]methyl 2-propenoate and (octahydro-4,7-methano-1H-indene-5,?-diyl)bis(methylene) di-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 87320-05-6

CMF C17 H26 O6

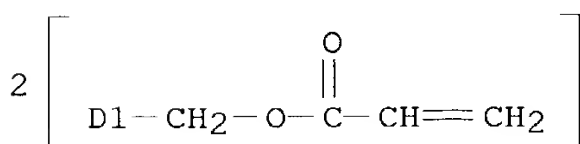
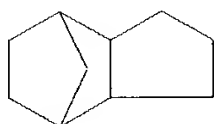


CM 2

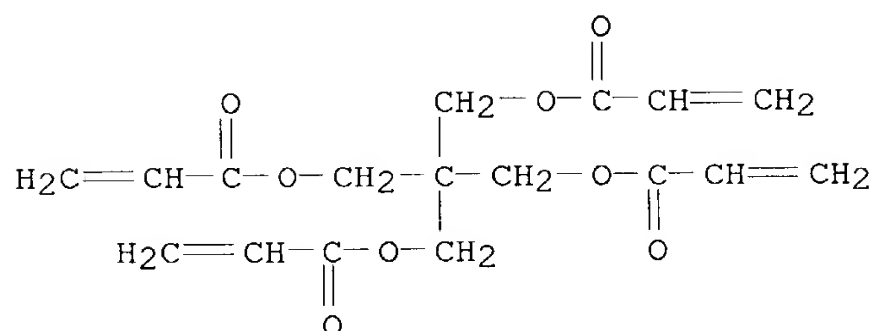
CRN 42594-17-2

CMF C18 H24 O4

CCI IDS



CRN 4986-89-4  
CMF C17 H20 O8

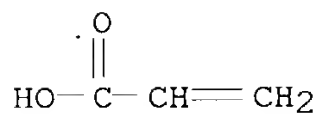


CM 4

CRN 55818-57-0  
CMF (C15 H16 O2 . C3 H5 Cl O)x . x C3 H4 O2

CM 5

CRN 79-10-7  
CMF C3 H4 O2

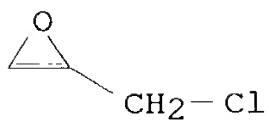


CM 6

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CRN 25068-38-6
CMF (C15 H16 O2 . C3 H5 Cl O)x
CCI PMS
```

CM 7

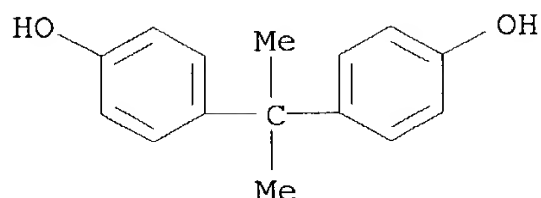
CRN 106-89-8  
CMF C3 H5 Cl O



CM 8

CRN 80-05-7  
CMF C15 H16 O2





L56 ANSWER 34 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1991:124628 HCAPLUS

DN 114:124628

TI Automotive **coating** compositions

IN Tabuchi, Ichiro; Isozaki, Osamu; Nakai, Noboru; Matoba, Takao

PA Kansai Paint Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 42 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 02232280	A2	19900914	JP 1989-52535	19890303
PRAI	JP 1989-52535		19890303		
AB	<p>The title compns., giving <b>coatings</b> resisting solvents, <b>H<sub>2</sub>O</b>, weather, acids, impact, chipping, and scratches, contain reaction products of functional group-containing resins, epoxides bearing groups reactive with these resins and silanes. A 75% solution of polyester (acid number 2.2) from trimethylolpropane 40.95, adipic acid 87.6, neopentyl glycol 73.5, and phthalic anhydride 44.4 parts was heated (1746 parts) with 131 parts succinic anhydride, and the resulting polyester was heated (313 parts) with 129 parts (3,4-epoxycyclohexyl)methyl 3,4-epoxycyclohexanecarboxylate until the acid number was 6. A mixture of this composition 100 (as solids), acetylacetone 10, Al(OH)<sub>3</sub> 20, Me <b>Ph</b> silicone (mol. weight 1000) 10, and pigment 60 parts was coated (40 ± 5 μm) on primed steel, baked, and coated with a polyester-melamine composition to give a <b>coating</b> with the above properties.</p>				
IC	ICM C09D201-00				
CC	42-8 ( <b>Coatings</b> , Inks, and Related Products)				
ST	polyester <b>coating</b> automobile; silicone <b>coating</b> automobile; epoxide polyester <b>coating</b> ; epoxycyclohexylmethyl epoxycyclohexanecarboxylate <b>coating</b>				
IT	<b>Coating</b> materials				
	(polyesters and silicon-containing acrylic polymers, for automobiles)				
IT	<p>3130-19-6D, Bis(3,4-epoxycyclohexylmethyl) adipate, reaction products with acrylic polymers 132338-24-0D, 2-Isocyanatoethyltriethoxysilane, reaction products with acrylic polymers 132612-27-2 <b>132612-28-3D</b>, reaction products with (isocyanatoethyl)triethoxysilane and bis[(epoxycyclohexyl)methyl] adipate <b>132612-29-4</b> 132612-30-7 132612-31-8 <b>132612-32-9</b></p>				
	RL: TEM (Technical or engineered material use); USES (Uses)				
	(coatings, for automobiles)				
IT	<p><b>132612-28-3D</b>, reaction products with (isocyanatoethyl)triethoxysilane and bis[(epoxycyclohexyl)methyl] adipate <b>132612-29-4</b> <b>132612-32-9</b></p>				
	RL: TEM (Technical or engineered material use); USES (Uses)				
	(coatings, for automobiles)				

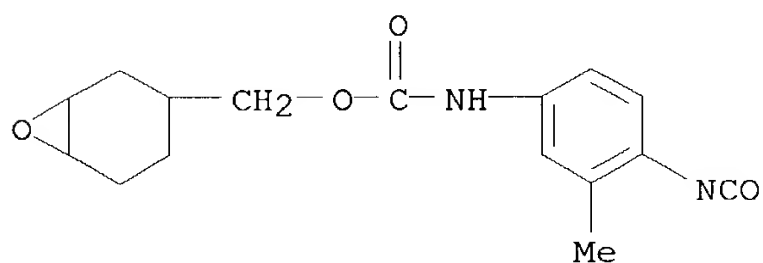
RN 132612-28-3 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with methyl  
2-methyl-2-propenoate, 7-oxabicyclo[4.1.0]hept-3-ylmethyl  
(4-isocyanato-3-methylphenyl)carbamate and 2-propenoic acid (9CI) (CA  
INDEX NAME)

CM 1

CRN 132338-23-9

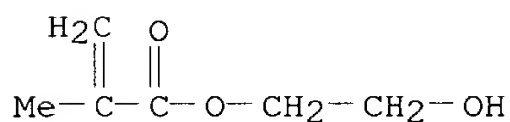
CMF C16 H18 N2 O4



CM 2

CRN 868-77-9

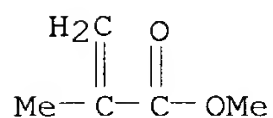
CMF C6 H10 O3



CM 3

CRN 80-62-6

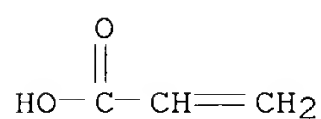
CMF C5 H8 O2



CM 4

CRN 79-10-7

CMF C3 H4 O2



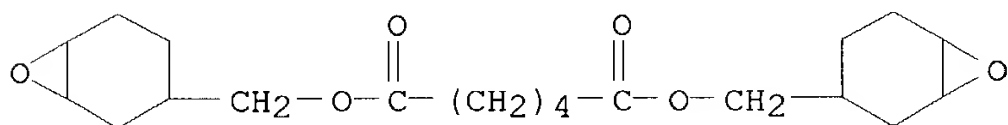
RN 132612-29-4 HCAPLUS

CN Hexanedioic acid, bis(7-oxabicyclo[4.1.0]hept-3-ylmethyl) ester, polymer with butyl 2-propenoate, 2-hydroxyethyl 2-propenoate, oxiranylmethyl 2-methyl-2-propenoate and 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 3130-19-6

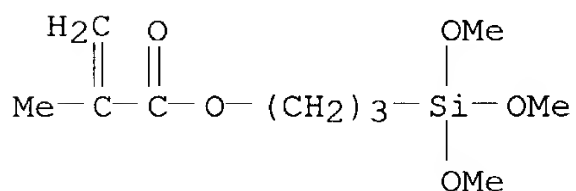
CMF C20 H30 O6



CM 2

CRN 2530-85-0

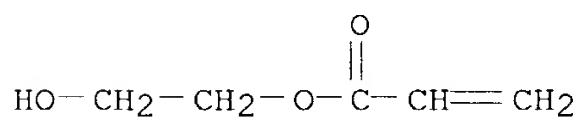
CMF C10 H20 O5 Si



CM 3

CRN 818-61-1

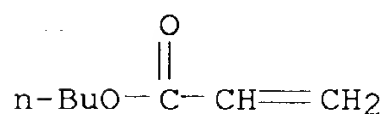
CMF C5 H8 O3



CM 4

CRN 141-32-2

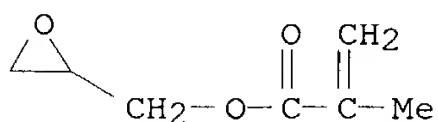
CMF C7 H12 O2



CM 5

CRN 106-91-2

CMF C7 H10 O3



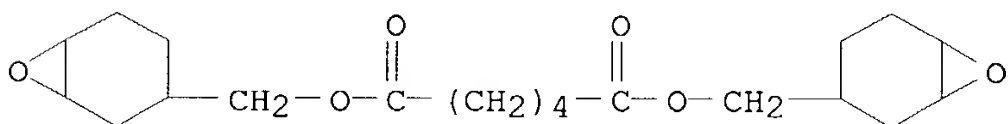
RN 132612-32-9 HCAPLUS

CN Hexanedioic acid, bis(7-oxabicyclo[4.1.0]hept-3-ylmethyl) ester, polymer with butyl 2-methyl-2-propenoate, ethenylbenzene, 2-hydroxyethyl 2-propenoate, oxiranylmethyl 2-methyl-2-propenoate and 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 3130-19-6

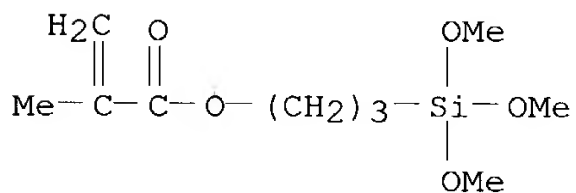
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CM 2

CRN 2530-85-0

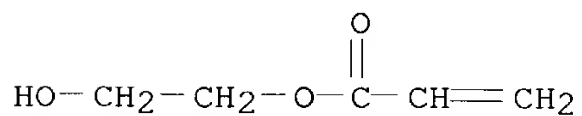
CMF C10 H20 O5 Si



CM 3

CRN 818-61-1

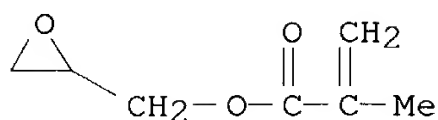
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CM 4

CRN 106-91-2

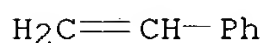
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CM 5

CRN 100-42-5

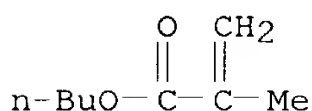
CMF C8 H8



CM 6

CRN 97-88-1

CMF C8 H14 O2



L56 ANSWER 35 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1990:593520 HCAPLUS

DN 113:193520

TI Electrodeposition **coating** composition based on binders  
**crosslinked** through deblocking of isocyanate groups and containing  
organotin **crosslinking** catalysts

IN Motohashi, Akira; Tsukahara, Yoshimitsu; Masuda, Kazuo; Haneishi,  
Hidehiko; Kume, Masafumi; Hayashi, Hirokazu

PA Kansai Paint Co., Ltd., Japan; Sankyo Organic Chemicals Co., Ltd.

SO U.S., 10 pp.

CODEN: USXXAM

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4904361	A	19900227	US 1989-318720	19890303
	CA 1335463	A1	19950502	CA 1989-592864	19890306
PRAI	US 1989-318720		19890303		
OS	MARPAT 113:193520				
AB	Anticorrosive, weather-resistant, low-temperature- <b>crosslinkable</b> <b>coating</b> compns. with good potlife based on the title binders contain $\text{R}_2\text{Sn}(\text{OCOC}_6\text{H}_4\text{R}_1)_2$ (I, R = C1-12 alkyl; R1 = H, C1-4 alkyl) or $(\text{R}_1\text{C}_6\text{H}_4\text{CO}_2\text{SnR}_2)_2\text{O}$ (II, R and R1 as defined for I) as <b>crosslinking</b> catalysts. Thus, stirring Araldite 6071 (bisphenol epoxy resin) 930, Araldite GY2600 (bisphenol epoxy resin) 380, Placel 205 (polycaprolactonediol) 550, dimethylbenzylamine acetate 2.6, p-nonylphenol 79, and nonylethanolamine MIBK ketamine 71 parts 2 h at 150°, adding diethanolamine 105, $\text{BuO}(\text{CH}_2)_2\text{OH}$ (III) 180, and $\text{EtO}(\text{CH}_2)_2\text{OH}$ (IV) 525 parts, and heating 3 h at 80-90° gave a 75% resin (V) solution Sep.,				

adding 80% solids FMK-3X (polyester monomer) 37.5, styrene 40, 2-hydroxyethyl methacrylate 25, Bu methacrylate 5, and AIBN 4 parts in 5 h to 26 parts III, heating 2 h at 130°, adding 5 parts III and 0.5 parts azobis(dimethylvaleronitrile) in 2 h, heating 2 h at 130°, and adding 23 parts IV gave a 62% resin (VI, number-average mol. weight 5000) solution

A 32% solids **aqueous** emulsion prepared from V solution 99.2, VI solution 13.2, ethylene glycol mono-2-ethylhexyl ether-blocked MDI 5, Me Et ketoxime-diblocked IPDI 12.4, II (R = Bu, R1 = H) (VII) 0.6, polypropylene glycol 0.5, Pb(OAc)2 1, and 10% HOAc 9.3 parts was combined (320.3 parts) with 55.56 parts pigment paste and **water** (bath solids content 20%), electrodeposited on a phosphated steel plate, dried to 25-μm thickness, and cured 20 min at 150-170° to give a **coating** with better compatibility, bath stability, **crosslinkability**, corrosion resistance, and weatherability than similar **coatings** using Bu2SnO, dioctyl tin oxide, or Bu2Sn dilaurate as catalyst instead of VII.

- IC ICM C25D013-06
- ICS C08L063-00
- NCL 204181700
- CC 42-3 (**Coatings**, Inks, and Related Products)
- ST electrophoretic **coating** organotin **crosslinking** catalyst; tin organo **crosslinking** catalyst **coating**; arom carboxylate alkyltin salt catalyst; benzoate butyl tin salt **crosslinking** catalyst; amine epoxy electrophoretic **coating**; anticorrosive electrophoretic **coating crosslinking** catalyst; weather resistant electrophoretic **coating**; polycaprolactone diol amine epoxy **coating**; isocyanate **crosslinking** amine epoxy **coating**
- IT **Crosslinking** catalysts  
(dialkyltin benzoate derivative salts, for electrophoretic **coating** binders through deblocking of isocyanate groups)
- IT **Coating** materials  
(electrophoretic, **crosslinking** of, through deblocking of isocyanate groups, catalysts for)
- IT 870-08-6  
RL: CAT (Catalyst use); USES (Uses)  
(catalysts, containing dialkyltin benzoate derivative salts, for **crosslinking** of electrophoretic **coating** binders through deblocking of isocyanate groups)
- IT 123280-32-0  
RL: CAT (Catalyst use); USES (Uses)  
(catalysts, for **crosslinking** of electrophoretic **coating** binders through deblocking of isocyanate groups)
- IT 64176-56-3, Elecron 9000  
RL: TEM (Technical or engineered material use); USES (Uses)  
(**coatings**, electrophoretic, **crosslinking** catalysts for)
- IT 104-40-5DP, reaction products with amine-epoxy resin-diisocyanate adducts  
109-89-7DP, reaction products with bisphenol A-epichlorohydrin-caprolactone-diethanolamine-IPDI copolymers 26471-62-5DP, TDI, reaction products with amine-bisphenol A epoxy resin-polyamide adducts  
**129734-31-2DP**, reaction products with diethylamine  
**130166-96-0DP**, reaction products with nonylphenol  
RL: PREP (Preparation)  
(manufacture of, as **crosslinked** electrophoretic **coatings**, **crosslinking** catalysts for)
- IT 32781-30-9DP, reaction products with diethanolamine-polycaprolactonediol-

epoxy resin adducts and nonylphenol 97418-76-3DP, reaction products with diethylamine 129734-30-1DP, reaction products with nonylphenol and monoethanolamine Me iso-Bu ketamine 130166-95-9P

RL: PREP (Preparation)

(manufacture of, for isocyanate-**crosslinked** electrophoretic **coatings** containing organotin catalysts)

IT 129734-31-2DP, reaction products with diethylamine

130166-96-0DP, reaction products with nonylphenol

RL: PREP (Preparation)

(manufacture of, as **crosslinked** electrophoretic **coatings**, **crosslinking** catalysts for)

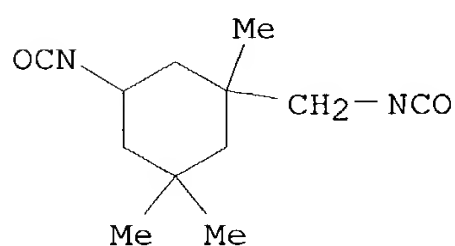
RN 129734-31-2 HCAPLUS

CN 2-Oxepanone, polymer with (chloromethyl)oxirane, 2,2'-iminobis[ethanol], 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane and 4,4'-(1-methylethylidene)bis[phenol] (9CI) (CA INDEX NAME)

CM 1

CRN 4098-71-9

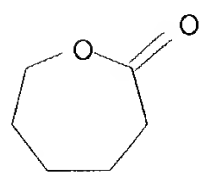
CMF C12 H18 N2 O2



CM 2

CRN 502-44-3

CMF C6 H10 O2



CM 3

CRN 111-42-2

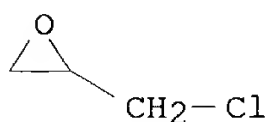
CMF C4 H11 N O2



CM 4

CRN 106-89-8

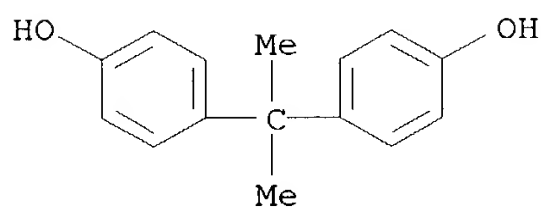
CMF C3 H5 Cl O



CM 5

CRN 80-05-7

CMF C15 H16 O2



RN 130166-96-0 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, butyl ester, polymer with 2-aminoethanol, Araldite GY 2600, (chloromethyl)oxirane, ethenylbenzene, FMK 3X, 2-hydroxyethyl 2-methyl-2-propenoate, 2,2'-iminobis[ethanol], 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane, 1,1'-methylenebis[4-isocyanatobenzene], 4,4'-(1-methylethylidene)bis[phenol] and Placel 205 (9CI) (CA INDEX NAME)

CM 1

CRN 129898-98-2

CMF Unspecified

CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 2

CRN 109489-28-3

CMF Unspecified

CCI MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 3

CRN 94188-96-2

CMF Unspecified

CCI PMS, MAN

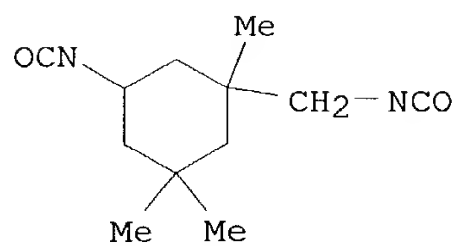
\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 4

CRN 4098-71-9

CMF C12 H18 N2 O2

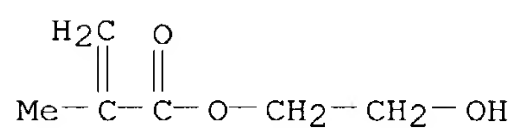




CM 5

CRN 868-77-9

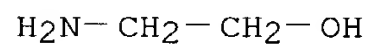
CMF C6 H10 O3



CM 6

CRN 141-43-5

CMF C2 H7 N O



CM 7

CRN 111-42-2

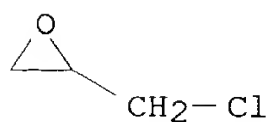
CMF C4 H11 N O2



CM 8

CRN 106-89-8

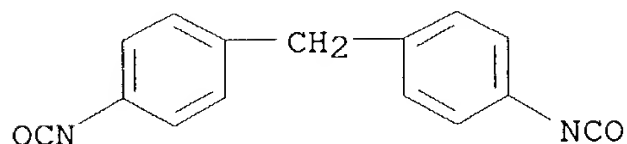
CMF C3 H5 Cl O



CM 9

CRN 101-68-8

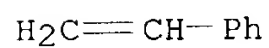
CMF C15 H10 N2 O2



CM 10

CRN 100-42-5

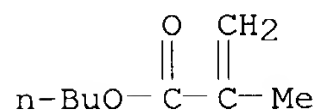
CMF C8 H8



CM 11

CRN 97-88-1

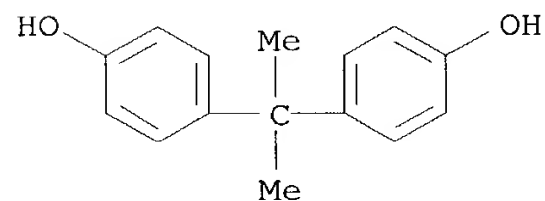
CMF C8 H14 O2



CM 12

CRN 80-05-7

CMF C15 H16 O2



L56 ANSWER 36 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN  
AN 1990:181572 HCAPLUS  
DN 112:181572  
TI Improving the **water** resistance of **coatings** formed by  
thermal reactive adhesive **coating** tapes or sheets  
IN Ono, Kiyoshi; Shirai, Hideaki  
PA Nichiban Co., Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 5 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 01268773	A2	19891026	JP 1988-95634	19880420
	JP 2700796	B2	19980121		
PRAI	JP 1988-95634		19880420		
AB	The <b>water</b> resistance is improved by topcoating of (meth) <b>acrylate</b> resins, <b>epoxy</b> resins, <b>polyesters</b> , or polyurethanes. Thus, a PET <b>film</b> was coated with an <b>acrylic</b> resin adhesive, bonded to stainless steel, heated, and the PET <b>film</b> was peeled to show the <b>coating</b> . The <b>coating</b> was topcoated with 95:5 Me <b>methacrylate</b> -2-hydroxyethyl <b>methacrylate</b> copolymer <b>crosslinked</b> with 0.5 Coronate HL, and immersed 24 h in <b>H2O</b> at 40° without change. <b>Water</b> sweating was observed without the topcoating.				
IC	ICM C09D005-00				
	ICS C09D005-00				
CC	42-10 ( <b>Coatings</b> , Inks, and Related Products) Section cross-reference(s): 55				
ST	<b>water</b> resistant <b>coating</b> stainless steel; <b>acrylic water</b> resistant <b>coating</b> ; <b>epoxy</b> <b>water</b> resistant <b>coating</b> ; <b>polyester</b> <b>water</b> resistant <b>coating</b> ; <b>polyurethane</b> <b>water</b> resistant <b>coating</b>				
IT	Polymerization (of vinyl monomers, for <b>water</b> -resistant <b>coatings</b> on stainless steel coated with <b>acrylic</b> resins)				
IT	<b>Coating</b> materials ( <b>water</b> -resistant, <b>acrylic</b> resins and <b>epoxy</b> resins and <b>polyesters</b> and polyurethanes, on stainless steel coated with <b>acrylic</b> resins)				
IT	12597-68-1 RL: USES (Uses) ( <b>coating</b> materials, <b>water</b> -resistant, <b>acrylic</b> resins and <b>epoxy</b> resins and <b>polyesters</b> and polyurethanes, on stainless steel coated with <b>acrylic</b> resins)				
IT	12597-68-1, Stainless steel, uses and miscellaneous RL: USES (Uses) ( <b>coatings</b> on, <b>acrylic</b> resins, topcoated with <b>water</b> -resistant polymers)				
IT	126351-77-7 RL: TEM (Technical or engineered material use); USES (Uses) ( <b>coatings</b> , on stainless steel, topcoated with <b>water</b> -resistant polymers)				
IT	<b>80675-00-9 80675-01-0</b> 126540-05-4 126540-06-5 126540-07-6 126540-08-7 126540-09-8 126560-81-4 RL: TEM (Technical or engineered material use); USES (Uses) ( <b>coatings</b> , <b>water</b> -resistant, on stainless steel coated with <b>acrylic</b> resins)				
IT	<b>80675-00-9 80675-01-0</b> RL: TEM (Technical or engineered material use); USES (Uses) ( <b>coatings</b> , <b>water</b> -resistant, on stainless steel coated with <b>acrylic</b> resins)				
RN	80675-00-9 HCAPLUS				
CN	Phenol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane and Coronate HL (9CI) (CA INDEX NAME)				

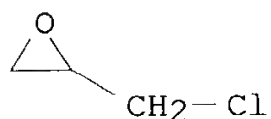
CM 1

CRN 37293-38-2  
CMF Unspecified  
CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

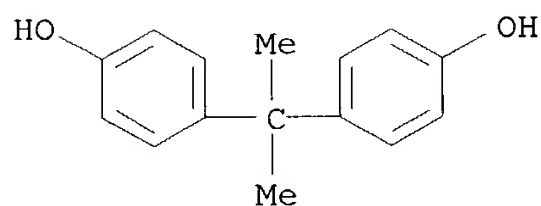
CM 2

CRN 106-89-8  
CMF C3 H5 Cl O



CM 3

CRN 80-05-7  
CMF C15 H16 O2

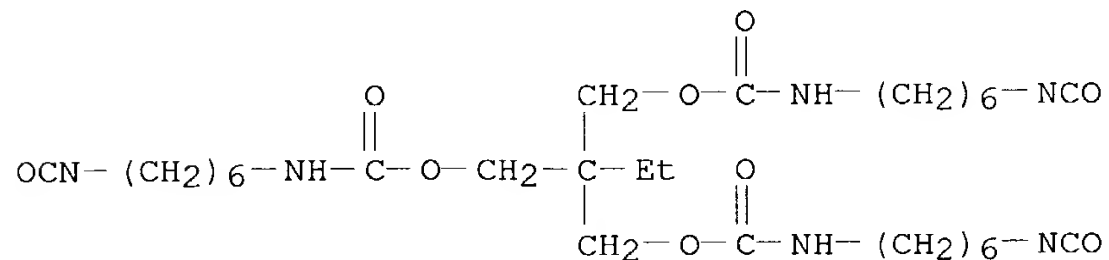


RN 80675-01-0 HCAPLUS

CN Carbamic acid, (6-isocyanatohexyl)-, 2-ethyl-2-[[[(6-isocyanatohexyl)amino]carbonyl]oxy]methyl]-1,3-propanediyl ester, polymer with (chloromethyl)oxirane and 4,4'-(1-methylethylidene)bis[phenol] (9CI) (CA INDEX NAME)

CM 1

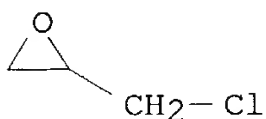
CRN 50886-64-1  
CMF C30 H50 N6 O9



CM 2

CRN 106-89-8

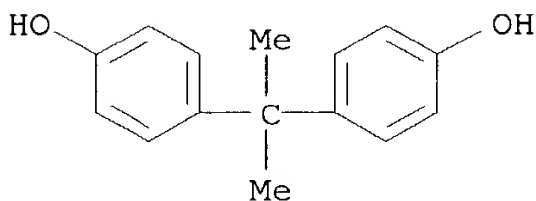
CMF C3 H5 Cl O



CM 3

CRN 80-05-7

CMF C15 H16 O2



L56 ANSWER 37 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1990:58322 HCAPLUS

DN 112:58322

TI Curable resins for **coatings**

IN Isozaki, Osamu; Iwasawa, Naozumi

PA Kansai Paint Co., Ltd., Japan

SO Ger. Offen., 19 pp.

CODEN: GWXXBX

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 3843323	A1	19890706	DE 1988-3843323	19881222
	DE 3843323	C2	19920910		
	JP 01167355	A2	19890703	JP 1987-326023	19871223
	JP 01167356	A2	19890703	JP 1987-326024	19871223
	JP 01229019	A2	19890912	JP 1988-55598	19880309
	GB 2212166	A1	19890719	GB 1988-29341	19881216
	GB 2212166	B2	19911120		
	CA 1323950	A1	19931102	CA 1988-586531	19881220
	US 5216094	A	19930601	US 1992-884881	19920518
PRAI	JP 1987-326023		19871223		
	JP 1987-326024		19871223		
	JP 1988-55598		19880309		
	US 1988-288069		19881222		

OS MARPAT 112:58322

AB The title compns. comprise resins containing  $\alpha,\beta$ -unsatd. carbonyl groups and primary and/or secondary OH groups; optionally other resins containing  $\alpha,\beta$ -unsatd. carbonyl groups and other resins bearing primary and/or secondary OH groups; and curing catalysts (alkali metal alkoxides, hydroxides, organic acid metal salts, and/or quaternary ammonium, phosphonium, or sulfonium hydroxides or salts). A polymer prepared from glycidyl **methacrylate** 142, 2-hydroxyethyl **acrylate** 116, Bu **methacrylate** 742, and **methacrylic** acid 86

parts had mol. weight 25,000 and unsatd. carbonyl group, primary OH, and secondary OH content 0.92, 0.92, and 0.92 mol/kg. A 50% solution of I containing

0.1 phr Me<sub>4</sub>N<sup>+</sup> OH<sup>-</sup> was coated on glass to dry thickness 20 μm and cured at 140° to give a **coating** resistant to 7 days in H<sub>2</sub>O at 40°, with gel fraction 98.2% and good color fastness.

- IC ICM C08L101-06  
ICS C08J003-24; C09D003-48
- ICI C08J003-24, C08K003-22, C08K005-09, C08K005-17, C08K005-36, C08K005-50; C08L101-06, C08L077-00, C08L075-00, C08L071-00, C08L067-00, C08L063-10, C08L061-04, C08L033-00, C08L015-00
- CC 42-7 (**Coatings**, Inks, and Related Products)  
Section cross-reference(s): 37
- ST hydroxyethyl **acrylate** copolymer **coating**; glycidyl **methacrylate** copolymer **coating**; water resistance **coating**; **crosslinking** catalyst  
**acrylic coating**; quaternary ammonium hydroxide catalyst
- IT **Crosslinking** catalysts  
(acid and onium salts, for **coatings** containing hydroxyl and unsatd. carbonyl groups)
- IT Alkali metal hydroxides  
Quaternary ammonium compounds, uses and miscellaneous  
Sulfonium compounds  
RL: CAT (Catalyst use); USES (Uses)  
(catalyst, for **crosslinking** of **coatings**)
- IT Carboxylic acids, compounds  
RL: CAT (Catalyst use); USES (Uses)  
(metal salts, catalyst, for **crosslinking** of **coatings**)
- IT **Coating** materials  
(**water**-resistant, **acrylic** and **epoxy** resins containing hydroxy and unsatd. carbonyl groups)
- IT 62-54-4, Calcium acetate 71-48-7, Cobalt acetate 75-59-2, Tetramethylammonium hydroxide 124-41-4, Sodium methylate 590-29-4, Potassium formate 1305-62-0, Calcium hydroxide, uses and miscellaneous 1310-58-3, Potassium hydroxide, uses and miscellaneous 5883-40-9 10581-12-1, Tetramethylammonium acetate 29384-34-7, Ethyldimethylsulfonium hydroxide 36880-49-6 124883-30-3, Ethyldimethylsulfonium acetate 124883-31-4 124883-32-5, Trimethylsulfonium acetate  
RL: CAT (Catalyst use); USES (Uses)  
(catalyst, for **crosslinking** of **coatings**)
- IT 818-61-1D, reaction products with **polyester-polyurethanes** 24980-41-4D, Polycaprolactone, triol derivs., polymers with diisocyanates and hydroxyethyl **acrylate** 25214-76-0, Ethylene glycol-phthalic acid-trimethylolpropane copolymer 25248-42-4D, Polycaprolactone, triol derivs., polymers with diisocyanates and hydroxyethyl **acrylate** 38702-23-7, Butyl **methacrylate**-2-hydroxyethyl **acrylate** copolymer 90249-15-3 92880-74-5 **118729-81-0D**, reaction products with hydroxyethyl **acrylate** 124363-46-8 **124889-02-7** **124889-03-8** 124889-04-9 **124889-05-0** 124933-62-6 124933-63-7 124933-64-8 **124933-65-9** 124933-66-0 124933-67-1  
RL: TEM (Technical or engineered material use); USES (Uses)  
(**coatings**, thermosetting and **water**-resistant)
- IT **118729-81-0D**, reaction products with hydroxyethyl **acrylate**

124889-02-7 124889-03-8 124889-05-0

124933-65-9

RL: TEM (Technical or engineered material use); USES (Uses)  
(**coatings**, thermosetting and **water**-resistant)

RN 118729-81-0 HCAPLUS

CN Cyclohexane, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethyl-, polymer  
with Placel 308 (9CI) (CA INDEX NAME)

CM 1

CRN 95918-32-4

CMF Unspecified

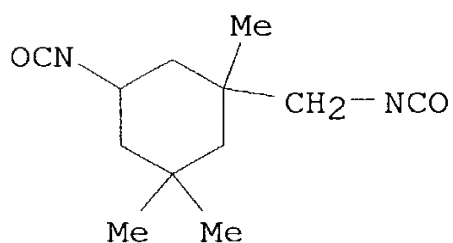
CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 2

CRN 4098-71-9

CMF C12 H18 N2 O2



RN 124889-02-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, butyl ester, polymer with 2-hydroxyethyl  
2-propenoate, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane  
and Placel 308 (9CI) (CA INDEX NAME)

CM 1

CRN 95918-32-4

CMF Unspecified

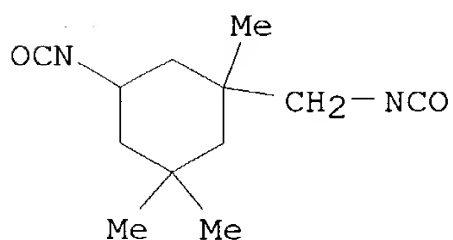
CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 2

CRN 4098-71-9

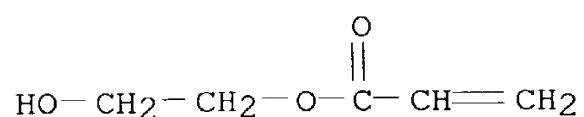
CMF C12 H18 N2 O2



CM 3

CRN 818-61-1

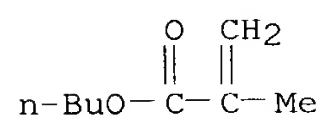
CMF C5 H8 O3



CM 4

CRN 97-88-1

CMF C8 H14 O2



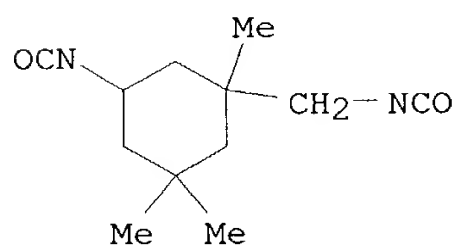
RN 124889-03-8 HCAPLUS

CN 2-Propenamide, N-(hydroxymethyl)-, polymer with (chloromethyl)oxirane, 2,2'-iminobis[ethanol], 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane and 4,4'-(1-methylethylidene)bis[phenol] (9CI) (CA INDEX NAME)

CM 1

CRN 4098-71-9

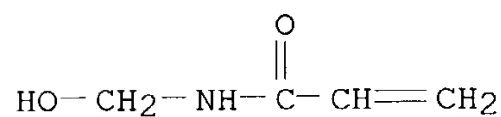
CMF C12 H18 N2 O2



CM 2

CRN 924-42-5

CMF C4 H7 N O2



CM 3

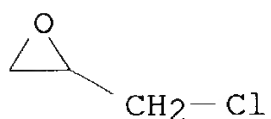


CRN 111-42-2  
CMF C4 H11 N O2



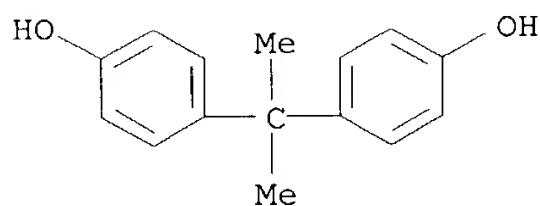
CM 4

CRN 106-89-8  
CMF C3 H5 Cl O



CM 5

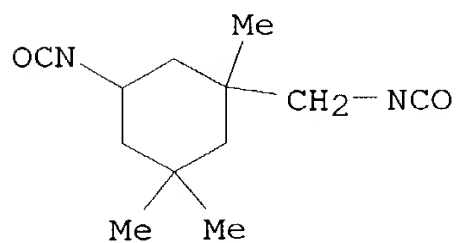
CRN 80-05-7  
CMF C15 H16 O2



RN 124889-05-0 HCAPLUS  
CN 2-Propenoic acid, 2-hydroxyethyl ester, polymer with 2,2'-iminobis[ethanol], 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane and 4,4'-(1-methylethylidene)bis[phenol] (9CI) (CA INDEX NAME)

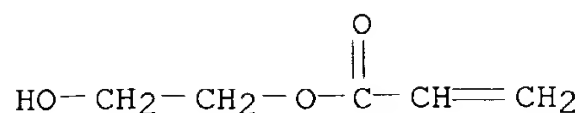
CM 1

CRN 4098-71-9  
CMF C12 H18 N2 O2



CM 2

CRN 818-61-1  
CMF C5 H8 O3



CM 3

CRN 111-42-2

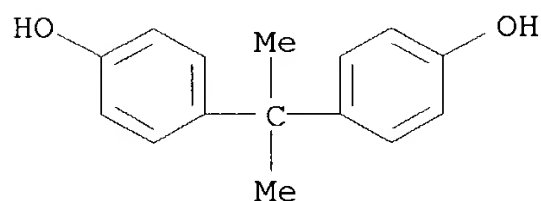
CMF C4 H11 N O2



CM 4

CRN 80-05-7

CMF C15 H16 O2



RN 124933-65-9 HCAPLUS

CN 2-Propenoic acid, 2-hydroxyethyl ester, polymer with Epikote 154, 2,2'-iminobis[ethanol], 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane and Placel 308 (9CI) (CA INDEX NAME)

CM 1

CRN 95918-32-4

CMF Unspecified

CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 2

CRN 63939-13-9

CMF Unspecified

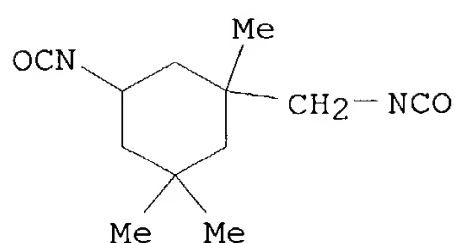
CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 3

CRN 4098-71-9

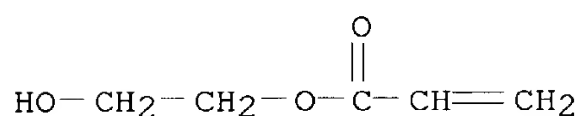
CMF C12 H18 N2 O2



CM 4

CRN 818-61-1

CMF C5 H8 O3



CM 5

CRN 111-42-2

CMF C4 H11 N O2



L56 ANSWER 38 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1989:596905 HCAPLUS

DN 111:196905

TI Resin compositions curable at low temperature in the presence of moisture and especially useful for **coatings**

IN Isozaki, Osamu; Nakai, Noboru; Ito, Satoru; Takami, Seiji

PA Kansai Paint Co., Ltd., Japan

SO Ger. Offen., 24 pp.

CODEN: GWXXBX

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	DE 3837878	A1	19890518	DE 1988-3837878	19881108
	DE 3837878	C2	19910103		
	JP 01123814	A2	19890516	JP 1987-282335	19871109
	JP 01123817	A2	19890516	JP 1987-282336	19871109
	GB 2212165	A1	19890719	GB 1988-25720	19881103
	GB 2212165	B2	19920701		
	US 4923945	A	19900508	US 1988-268406	19881108
PRAI	JP 1987-282335		19871109		
	JP 1987-282336		19871109		

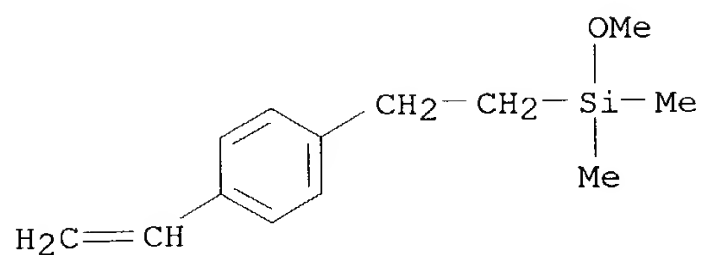
AB The title compns., of the 1-package type, contain  $\geq 1$  copolymer of an oxirane group-containing vinyl monomer and an alkoxysilyl group-containing vinyl monomer and a vinyl copolymer prepared from a siloxane macromonomer and an oxirane group-containing vinyl monomer as well as chelate compound

(curing accelerator) and a compound having number-average mol. weight <1000 and  $\leq 2$  alicyclic oxirane groups/mol. The composition cure at low temperature in the presence of moisture, cure uniformly in the interior and at the surface, and exhibit low shrinkage during curing. A copolymer (number-average mol. weight 7500) prepared from 3,4-epoxycyclohexylmethyl acrylate 50.2, Bu methacrylate 30.5, and p-(H<sub>2</sub>C:CH)C<sub>6</sub>H<sub>4</sub>CH<sub>2</sub>CH<sub>2</sub>SiMe<sub>2</sub>OMe 19.3 g was dissolved in toluene (50%) and mixed (100 g resin) with 2 g Al bis(Pr acetoacetate) and 15 g 3,4-epoxycyclohexylmethyl 3,4-epoxycyclohexanecarboxylate to give a **coating** composition. The composition was coated on glass and cured 30 min at 80° to give a 60- $\mu$ m **coating** having gel content 98.5% and good **water** and weather resistance.

IC ICM C08L043-04  
ICS C08L083-07  
ICA C08G077-20; C08J003-24; C08K005-54  
ICI C08F230-08, C08F224-00, C08F212-14, C08F220-32, C08F220-10  
CC 42-10 (**Coatings**, Inks, and Related Products)  
Section cross-reference(s): 37  
ST epoxy silane vinyl **coating** curing; siloxane epoxy vinyl **coating** curing; **crosslinking** epoxy silane vinyl resin; aluminum chelate curing epoxy silane; chelate metal curing epoxy silane  
IT **Crosslinking**  
(by moisture, of alkoxy-silyl and epoxy group-containing vinyl resins)  
IT **Crosslinking** catalysts  
(metal chelates, for alkoxy-silyl and epoxy group-containing resins)  
IT **Coating** materials  
(one-component, moisture-curable, alkoxy-silyl and epoxy group-containing vinyl resins for)  
IT 13963-57-0, Aluminum tris(acetyl acetonate) 15306-17-9, Aluminum tris(ethyl acetoacetate) 15556-37-3, Aluminum tris(propyl acetoacetate) 17501-44-9, Zirconium tetrakis(acetylacetonate) 114055-92-4  
RL: CAT (Catalyst use); USES (Uses)  
(catalysts, for curing of resins containing alkoxy-silyl and epoxy groups)  
IT 123634-89-9 123634-90-2 123634-91-3  
123634-92-4 123649-33-2 123649-34-3  
123649-35-4 123649-36-5 123649-37-6  
RL: TEM (Technical or engineered material use); USES (Uses)  
(**coatings**, from one-package moisture-curing compns.)  
IT 123634-89-9 123634-90-2 123634-91-3  
123634-92-4 123649-33-2 123649-34-3  
123649-35-4 123649-36-5 123649-37-6  
RL: TEM (Technical or engineered material use); USES (Uses)  
(**coatings**, from one-package moisture-curing compns.)  
RN 123634-89-9 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, butyl ester, polymer with bis(7-oxabicyclo[4.1.0]hept-3-ylmethyl) 1,6-hexanediylbis[carbamate], [2-(4-ethenylphenyl)ethyl]methoxydimethylsilane and 7-oxabicyclo[4.1.0]hept-3-ylmethyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

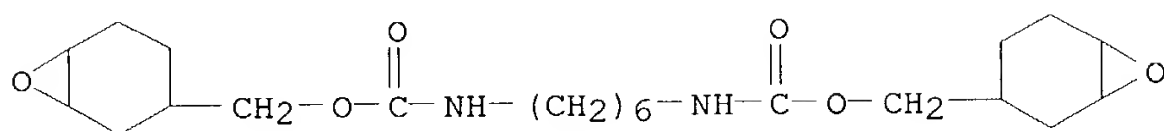
CRN 113970-37-9  
CMF C13 H20 O Si



CM 2

CRN 79551-96-5

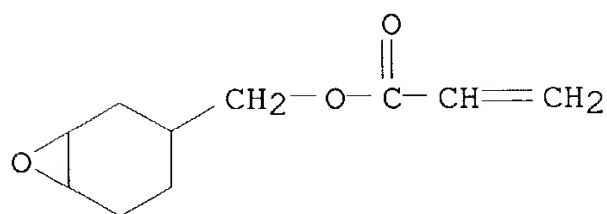
CMF C22 H36 N2 O6



CM 3

CRN 64630-63-3

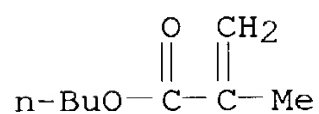
CMF C10 H14 O3



CM 4

CRN 97-88-1

CMF C8 H14 O2

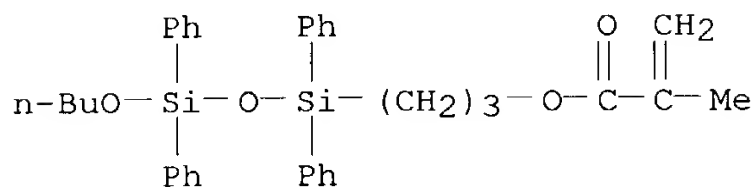


RN 123634-90-2 HCAPLUS

CN 7-Oxabicyclo[4.1.0]heptane-3-carboxylic acid, 7-oxabicyclo[4.1.0]hept-3-ylmethyl ester, polymer with 3-(3-butoxy-1,1,3,3-tetraphenyldisiloxanyl)propyl 2-methyl-2-propenoate and 2-hydroxy-2-(7-oxabicyclo[4.1.0]hept-3-yl)ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

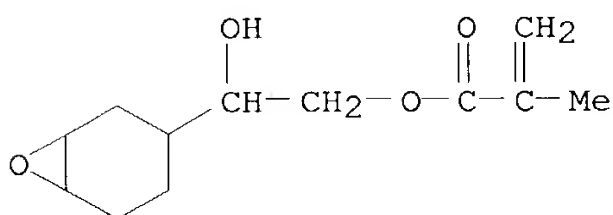
CM 1

CRN 113970-40-4  
CMF C35 H40 O4 Si2



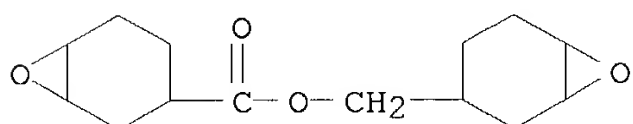
CM 2

CRN 29850-28-0  
CMF C12 H18 O4



CM 3

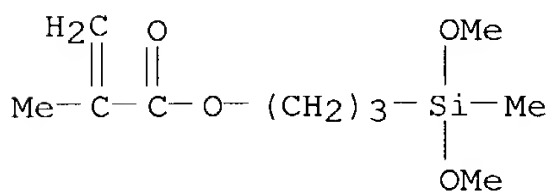
CRN 2386-87-0  
CMF C14 H20 O4



RN 123634-91-3 HCAPLUS  
CN 7-Oxabicyclo[4.1.0]heptane-3-carboxylic acid, 7-oxabicyclo[4.1.0]hept-3-ylmethyl ester, polymer with butyl 2-propenoate, 3-(dimethoxymethylsilyl)propyl 2-methyl-2-propenoate, ethenylbenzene and octahydro-2,5-methano-2H-indeno[1,2-b]oxiren-3-yl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

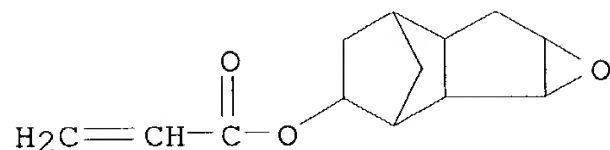
CRN 14513-34-9  
CMF C10 H20 O4 Si



CM 2

CRN 2389-91-5

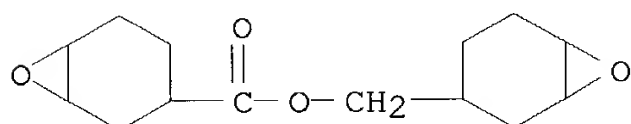
CMF C13 H16 O3



CM 3

CRN 2386-87-0

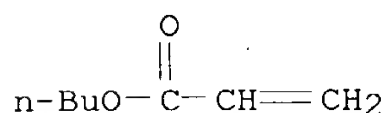
CMF C14 H20 O4



CM 4

CRN 141-32-2

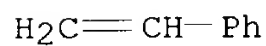
CMF C7 H12 O2



CM 5

CRN 100-42-5

CMF C8 H8

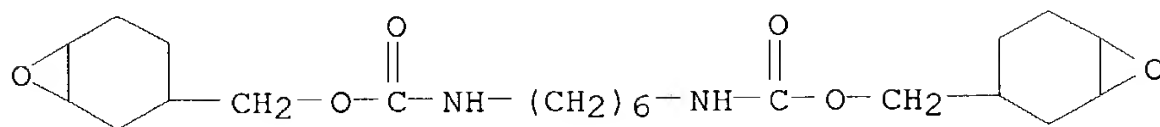


RN 123634-92-4 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, butyl ester, polymer with  
bis(7-oxabicyclo[4.1.0]hept-3-ylmethyl) 1,6-hexanediylbis[carbamate],  
ethenylbenzene, 2-ethylhexyl 2-methyl-2-propenoate, 2-hydroxyethyl  
2-methyl-2-propenoate, oxiranylmethyl 2-methyl-2-propenoate and  
3-(trimethoxysilyl)propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

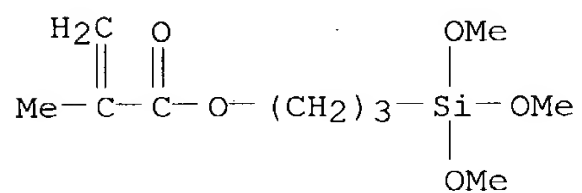
CM 1

CRN 79551-96-5  
CMF C22 H36 N2 O6



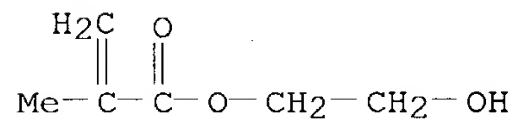
CM 2

CRN 2530-85-0  
CMF C10 H20 O5 Si



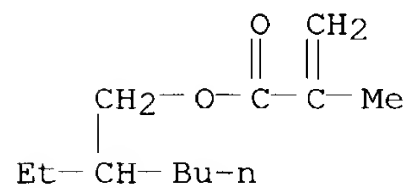
CM 3

CRN 868-77-9  
CMF C6 H10 O3



CM 4

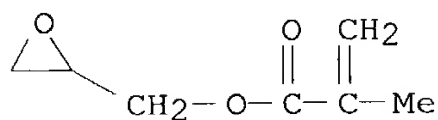
CRN 688-84-6  
CMF C12 H22 O2



CM 5

CRN 106-91-2  
CMF C7 H10 O3

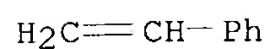




CM 6

CRN 100-42-5

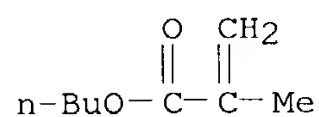
CMF C8 H8



CM 7

CRN 97-88-1

CMF C8 H14 O2



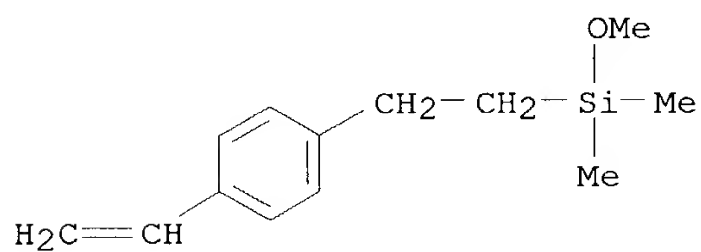
RN 123649-33-2 HCAPLUS

CN 7-Oxabicyclo[4.1.0]heptane-3-carboxylic acid, 7-oxabicyclo[4.1.0]hept-3-ylmethyl ester, polymer with butyl 2-methyl-2-propenoate, [2-(4-ethenylphenyl)ethyl]methoxydimethylsilane and 7-oxabicyclo[4.1.0]hept-3-ylmethyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 113970-37-9

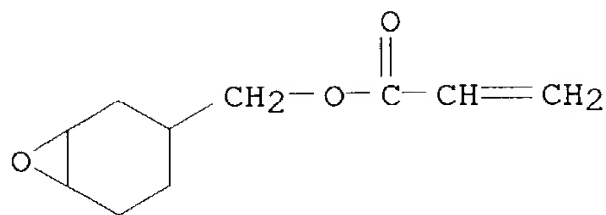
CMF C13 H20 O Si



CM 2

CRN 64630-63-3

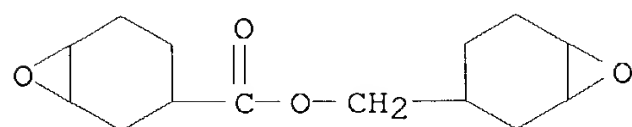
CMF C10 H14 O3



CM 3

CRN 2386-87-0

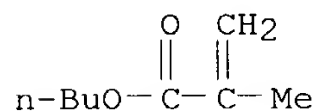
CMF C14 H20 O4



CM 4

CRN 97-88-1

CMF C8 H14 O2



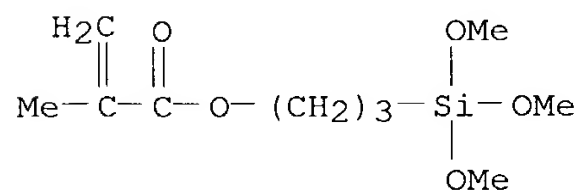
RN 123649-34-3 HCAPLUS

CN 7-Oxabicyclo[4.1.0]heptane-3-carboxylic acid, 7-oxabicyclo[4.1.0]hept-3-ylmethyl ester, polymer with butyl 2-propenoate, ethenylbenzene, oxiranylmethyl 2-methyl-2-propenoate, trimethoxymethylsilane and 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 2530-85-0

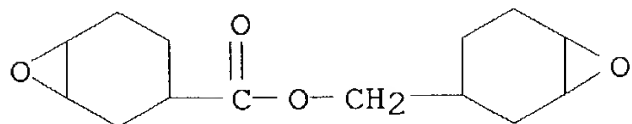
CMF C10 H20 O5 Si



CM 2

CRN 2386-87-0

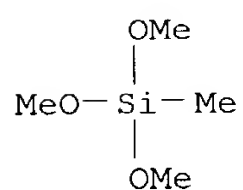
CMF C14 H20 O4



CM 3

CRN 1185-55-3

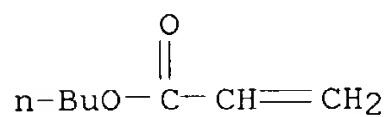
CMF C4 H12 O3 Si



CM 4

CRN 141-32-2

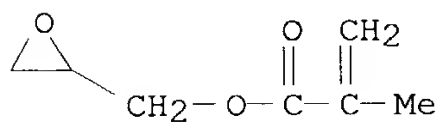
CMF C7 H12 O2



CM 5

CRN 106-91-2

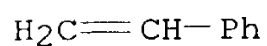
CMF C7 H10 O3



CM 6

CRN 100-42-5

CMF C8 H8



RN 123649-35-4 HCAPLUS

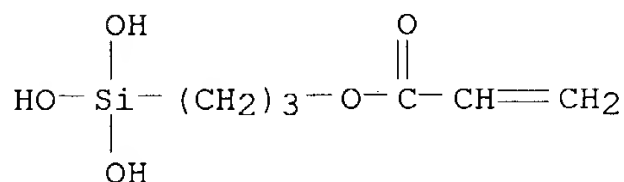
CN 2-Propenoic acid, 2-methyl-, 2-ethylhexyl ester, polymer with

KATHLEEN FULLER EIC 1700 REMSEN 4B28 571/272-2505

bis(7-oxabicyclo[4.1.0]hept-3-ylmethyl) 1,6-hexanediylbis[carbamate],  
2-hydroxyethyl 2-propenoate, 7-oxabicyclo[4.1.0]hept-3-ylmethyl  
2-methyl-2-propenoate, phenylsilanetriol and 3-(trihydroxysilyl)propyl  
2-propenoate (9CI) (CA INDEX NAME)

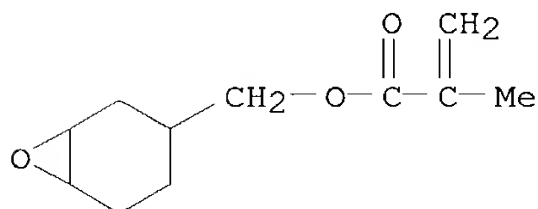
CM 1

CRN 112310-26-6  
CMF C6 H12 O5 Si



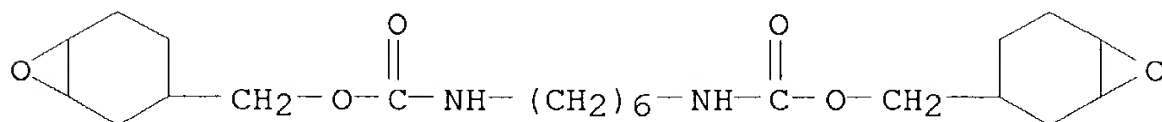
CM 2

CRN 82428-30-6  
CMF C11 H16 O3



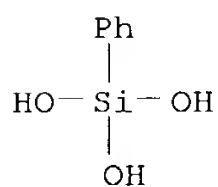
CM 3

CRN 79551-96-5  
CMF C22 H36 N2 O6



CM 4

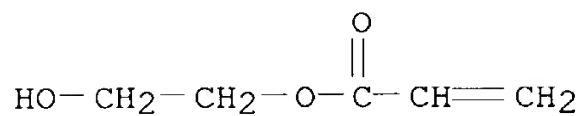
CRN 3047-74-3  
CMF C6 H8 O3 Si



CM 5

CRN 818-61-1

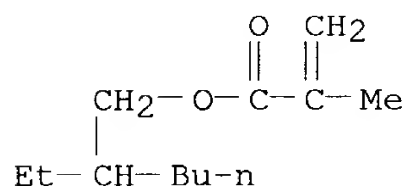
CMF C5 H8 O3



CM 6

CRN 688-84-6

CMF C12 H22 O2



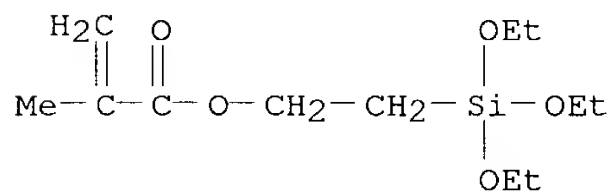
RN 123649-36-5 HCAPLUS

CN 7-Oxabicyclo[4.1.0]heptane-3-carboxylic acid, 7-oxabicyclo[4.1.0]hept-3-ylmethyl ester, polymer with butyl 2-propenoate, ethenylbenzene, oxiranylmethyl 2-methyl-2-propenoate, 2-(triethoxysilyl)ethyl 2-methyl-2-propenoate and trimethoxyphenylsilane (9CI) (CA INDEX NAME)

CM 1

CRN 83532-80-3

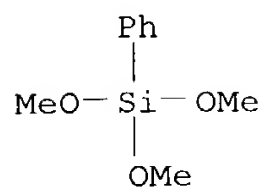
CMF C12 H24 O5 Si



CM 2

CRN 2996-92-1

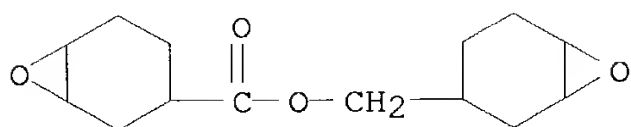
CMF C9 H14 O3 Si



CM 3

CRN 2386-87-0

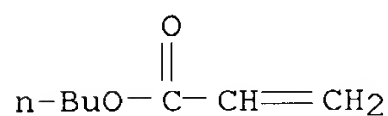
CMF C14 H20 O4



CM 4

CRN 141-32-2

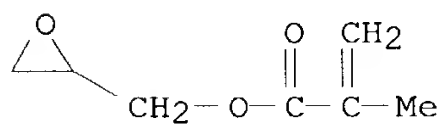
CMF C7 H12 O2



CM 5

CRN 106-91-2

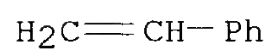
CMF C7 H10 O3



CM 6

CRN 100-42-5

CMF C8 H8



RN 123649-37-6 HCAPLUS

CN 7-Oxabicyclo[4.1.0]heptane-3-carboxylic acid, 7-oxabicyclo[4.1.0]hept-3-ylmethyl ester, polymer with butyl 2-propenoate, ethenylbenzene,

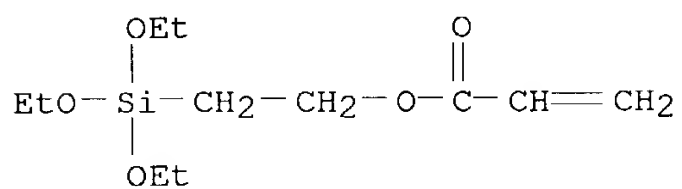
KATHLEEN FULLER EIC 1700 REMSEN 4B28 571/272-2505

oxiranylmethyl 2-methyl-2-propenoate, 2-(triethoxysilyl)ethyl 2-propenoate  
and trimethoxymethylsilane (9CI) (CA INDEX NAME)

CM 1

CRN 83532-81-4

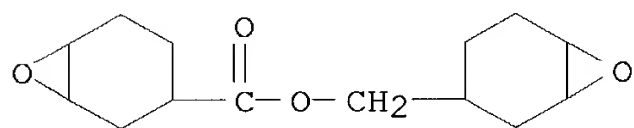
CMF C11 H22 O5 Si



CM 2

CRN 2386-87-0

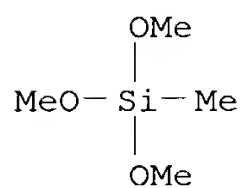
CMF C14 H20 O4



CM 3

CRN 1185-55-3

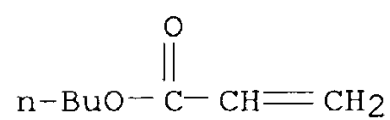
CMF C4 H12 O3 Si



CM 4

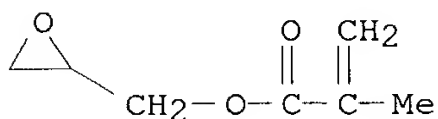
CRN 141-32-2

CMF C7 H12 O2



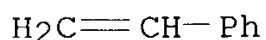
CM 5

CRN 106-91-2  
CMF C7 H10 O3



CM 6

CRN 100-42-5  
CMF C8 H8



L56 ANSWER 39 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1989:596858 HCAPLUS

DN 111:196858

TI Epoxy ester urethane polymers grafted with acrylic monomers for use in primers for metals

IN Huybrechts, Jozef Theresia; Vleminckx, Victor Roger

PA du Pont de Nemours, E. I., and Co., USA

SO PCT Int. Appl., 17 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 8905316	A1	19890615	WO 1987-US3224	19871210

W: JP

RW: BE, DE, FR, GB, IT, NL, SE

PRAI WO 1987-US3224 19871210

AB The title polymers are prepared and used in **aqueous** primer dispersions which contain  $\leq 10\%$  volatile organic solvents and amines and give

**coatings (crosslinkable at 140-200°)** on metals

which are suitable for topcoating to give **coatings** with good hardness, flexibility, and resistance to corrosion and chipping. An epoxy ester urethane prepolymer was prepared from neopentyl glycol,  $\text{OCN}(\text{CH}_2)_6\text{NCO}$ , succinic anhydride, Epon 1001, and dimethylolpropionic acid and grafted with a mixture of styrene, Me methacrylate, Bu acrylate, hydroxyethyl acrylate, and acrylic acid to give a graft copolymer which was used with Cymel 303 in the preparation of an **aqueous** primer composition

IC ICM C08F283-00

ICS C08F285-00; C08K003-20; C08L051-08

CC 42-7 (**Coatings**, Inks, and Related Products)

Section cross-reference(s): 55, 56

ST metal primer acrylic epoxy urethane; primer acrylic epoxy urethane graft; chip resistance primer metal

IT Fatty acids, esters

RL: USES (Uses)

(C9-11-branched, esters, with glycidol, graft polymers, primers containing, for chip-resistant **coatings**)



IT **Coating materials**

(chip-resistant, primers, acrylic-epoxy-urethane graft polymers, for metals)

IT 79-10-7D, 2-Propenoic acid, graft polymers 80-05-7D, graft polymers  
80-62-6D, graft polymers 100-42-5D, graft polymers 106-89-8D, graft  
polymers 108-30-5D, graft polymers 126-30-7D, graft polymers  
556-52-5D, Oxiranemethanol, esters with branched fatty acids, graft  
polymers 822-06-0D, graft polymers 4767-03-7D, graft polymers

**123565-02-6**

RL: USES (Uses)

(primers containing, **aqueous**, for chip-resistant **coatings**)

IT **123565-02-6**

RL: USES (Uses)

(primers containing, **aqueous**, for chip-resistant **coatings**)

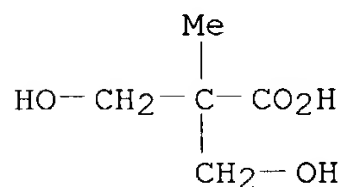
RN 123565-02-6 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl  
2-propenoate, (chloromethyl)oxirane, dihydro-2,5-furandione,  
1,6-diisocyanatohexane, 2,2-dimethyl-1,3-propanediol, ethenylbenzene,  
2-ethylhexyl 2-propenoate, formaldehyde, 3-hydroxy-2-(hydroxymethyl)-2-  
methylpropanoic acid, 4,4'-(1-methylethylidene)bis[phenol], 2-propenoic  
acid and 1,3,5-triazine-2,4,6-triamine, graft (9CI) (CA INDEX NAME)

CM 1

CRN 4767-03-7

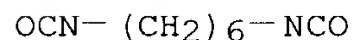
CMF C5 H10 O4



CM 2

CRN 822-06-0

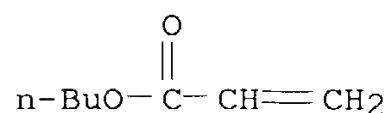
CMF C8 H12 N2 O2



CM 3

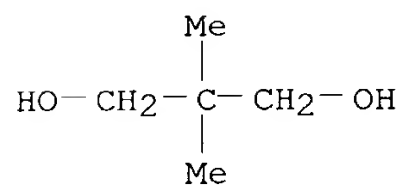
CRN 141-32-2

CMF C7 H12 O2



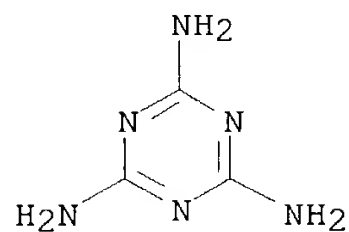
CM 4

CRN 126-30-7  
CMF C5 H12 O2



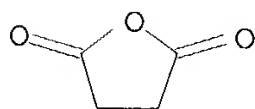
CM 5

CRN 108-78-1  
CMF C3 H6 N6



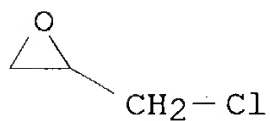
CM 6

CRN 108-30-5  
CMF C4 H4 O3



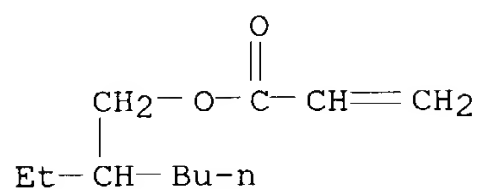
CM 7

CRN 106-89-8  
CMF C3 H5 Cl O



CM 8

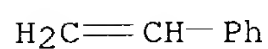
CRN 103-11-7  
CMF C11 H20 O2



CM 9

CRN 100-42-5

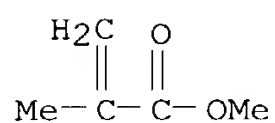
CMF C8 H8



CM 10

CRN 80-62-6

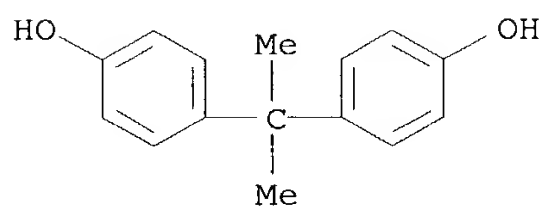
CMF C5 H8 O2



CM 11

CRN 80-05-7

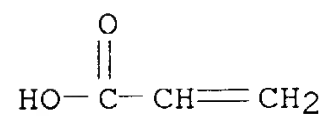
CMF C15 H16 O2



CM 12

CRN 79-10-7

CMF C3 H4 O2



CM 13

CRN 50-00-0  
CMF C H2 O

H<sub>2</sub>C=O

L56 ANSWER 40 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1988:100177 HCAPLUS

DN 108:100177

TI Urethane rubber-unsaturated alkyd-cement underwater-curable compositions

IN Takiyama, Eiichiro; Arai, Michiaki; Arai, Takao

PA Showa Highpolymer Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 62223258	A2	19871001	JP 1986-66061	19860326
	JP 06025300	B4	19940406		
PRAI	JP 1986-66061		19860326		

AB Underwater-curable compns. useful as **coatings** and adhesives comprise 3 components: (A) mixts. of **crosslinking** agents, polymerizable monomers, stabilizers, and polyurethanes obtained by the reaction of unsatd. isocyanates and acrylic rubber obtained by copolymn. of acrylates, acrylonitrile (I), and OH-containing monomers, (B) mixts. of **crosslinking** agents, polymerizable monomers, stabilizers, and unsatd. alkyds obtained by the reaction of  $\alpha$ ,  $\beta$ -polybasic acids or their anhydrides with phenolic compound-modified epoxy resins or reaction products of polyhydric phenolic compds. and monoepoxides.; and (C) cement. The above 3 components will be mixed right before using. Thus, component (A) comprised a polyurethane obtained from isophorone diisocyanate and 15:80:5 (mol%) I-Et acrylate-2-hydroxyethyl acrylate copolymer rubber 25, cumene hydroperoxide 3, Me methacrylate (II) 75, and p-benzoquinone (III) 0.01 part. Component (B) comprised an unsatd. alkyd (obtained by the reaction of 3,5-xyleneol-modified DER 330 with fumaric acid) 65, Co naphthenate 1, II 35, and III 0.01 part. A **water**-curable adhesive comprising component (A) 60, component (B) 40, and cement 120 parts showed tensile shear adhesive strength 80-107 kg/cm<sup>2</sup> and tensile strength 30-50 kg after being cured 3 days in **water**.

IC ICM C08L067-06

ICS C08F299-00; C08F299-04; C09J003-14

CC 58-1 (Cement, Concrete, and Related Building Materials)

Section cross-reference(s): 38, 42

ST **water** curable adhesive manuf; acrylonitrile copolymer adhesive **water** curable; ethyl acrylate copolymer adhesive **water** curable; hydroxyethyl acrylate copolymer adhesive; methyl methacrylate reactive diluent adhesive; xyleneol modified epoxy reaction adhesive; fumaric acid alkyd adhesive; polyurethane adhesive **water** curable; cement alkyd polyurethane adhesive

IT Cement

(compns. with urethane rubber and unsatd. alkyd, underwater-curable)

IT **Water**-resistant materials

(adhesives, urethane rubber-unsatd. alkyd-cement compns.)

IT **Crosslinking**  
 (radical, under **water**, of urethane-acrylic rubber and unsatd. alkyd and cement composition)

IT Adhesives  
 (underwater-curable, urethane rubber-unsatd. alkyd-cement compns.)

IT **Coating materials**  
 (underwater-curable, **water**-resistant, urethane rubber-unsatd. alkyd-cement compns.)

IT Adhesives  
 (**water**-resistant, urethane rubber-unsatd. alkyd-cement compns.)

IT **113151-27-2** 113192-38-4  
 RL: USES (Uses)  
 (adhesives, with cement, underwater-curable)

IT **113151-27-2**  
 RL: USES (Uses)  
 (adhesives, with cement, underwater-curable)

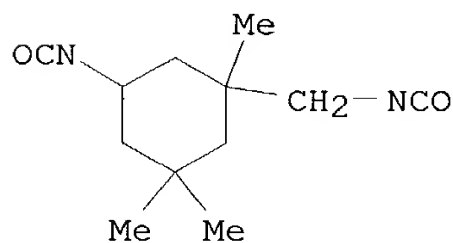
RN 113151-27-2 HCAPLUS

CN 2-Butenedioic acid (2E)-, polymer with (chloromethyl)oxirane, ethyl 2-propenoate, 2-hydroxyethyl 2-methyl-2-propenoate, 2-hydroxyethyl 2-propenoate, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane, 4,4'-(1-methylethylidene)bis[phenol], methyl 2-methyl-2-propenoate and 2-propenenitrile (9CI) (CA INDEX NAME)

CM 1

CRN 4098-71-9

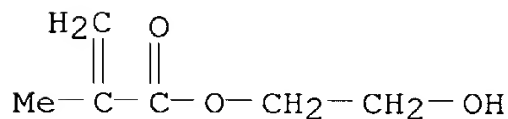
CMF C12 H18 N2 O2



CM 2

CRN 868-77-9

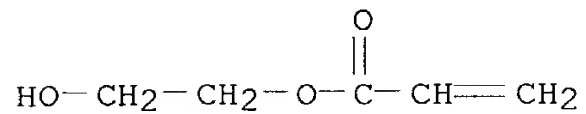
CMF C6 H10 O3



CM 3

CRN 818-61-1

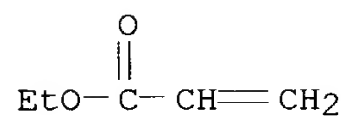
CMF C5 H8 O3



CM 4

CRN 140-88-5

CMF C5 H8 O2

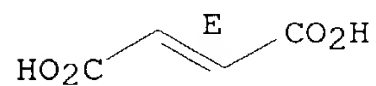


CM 5

CRN 110-17-8

CMF C4 H4 O4

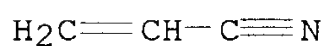
Double bond geometry as shown.



CM 6

CRN 107-13-1

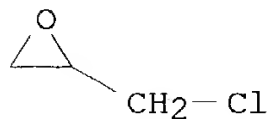
CMF C3 H3 N



CM 7

CRN 106-89-8

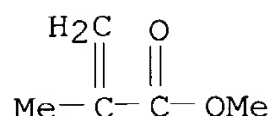
CMF C3 H5 Cl O



CM 8

CRN 80-62-6

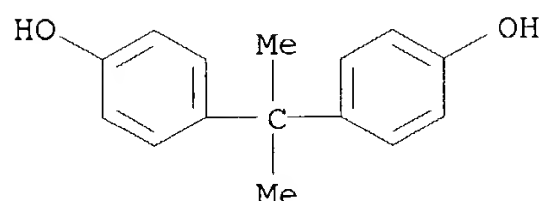
CMF C5 H8 O2



CM 9

CRN 80-05-7

CMF C15 H16 O2



L56 ANSWER 41 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1985:47429 HCAPLUS

DN 102:47429

TI **Aqueous** resin **coating** materials

PA Toho Chemical Industry Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 59157103	A2	19840906	JP 1983-30210	19830226
PRAI	JP 1983-30210		19830226		

AB Polyurethanes are dispersed in **water**, mixed with polymerizable ethylenic unsatd. compds., and emulsion polymerized to prepare **coating** materials. Thus, 2000 g P-1000 (a polyether polyol) and 1000 g MDI were heated at 80-85° to NCO % 5.6, mixed with 116 g dimethylolpropionic acid and 111 g 1,4-butanediol, diluted with 650 g dioxane and 650 g DMF, and mixed with 104 g **aqueous** NH3 and 5900 g **water**. A mixture containing 224 g Me methacrylate and 27 g 2-ethylhexyl acrylate was added in 30 min to a mixture containing the above composition 380, **water** 320, GAFAC RE-610 5.3, Nonal 218 5.3, K2S2O8 1.6, and Denalcol EX-820 (I, diepoxide) 15 g at 80-83°, heated for an addnl. 2 h, and used to form a **coating** having pencil hardness F and very good resistance to 2% NaOH, compared with 2B and fair, resp., for a **coating** formed without I.

IC C08F002-24; C08F020-14

CC 42-7 (**Coatings**, Inks, and Related Products)

ST epoxy resin **crosslinking** agent; polyurethane vinyl copolymer **coating**; emulsion polymn polyurethane acrylate

IT Epoxy resins, uses and miscellaneous

RL: MOA (Modifier or additive use); USES (Uses)  
(**crosslinking** agents, for vinyl monomer-grafted polyurethanes)

IT **Crosslinking** agents

(epoxy resins, for vinyl monomer-grafted polyurethanes, for **aq**

. **coatings**)

IT Vinyl compounds, reactions  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (grafting of, on polyurethanes, in emulsion)

IT Urethane polymers, reactions  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (grafting on, of vinyl monomers, in emulsion)

IT Polymerization  
 (emulsion, graft, of vinyl monomers on polyurethanes, for **aqueous coatings**)

IT **Coating** materials  
 (**water**-thinned, containing vinyl monomer-grafted polyurethanes)

IT **94060-79-4P 94061-03-7P 94229-94-4P**  
**94352-39-3P 94361-46-3P**  
 RL: PREP (Preparation)  
 (graft, manufacture of, for **aqueous coatings**)

IT **94060-79-4P 94061-03-7P 94229-94-4P**  
**94352-39-3P 94361-46-3P**  
 RL: PREP (Preparation)  
 (graft, manufacture of, for **aqueous coatings**)

RN 94060-79-4 HCAPLUS

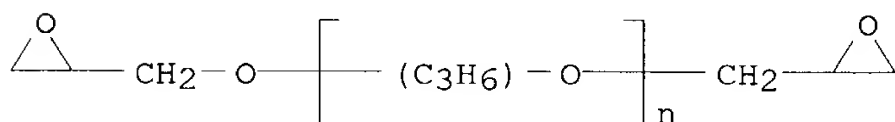
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with 1,4-butanediol, 2-ethylhexyl 2-propenoate,  $\alpha$ -hydro- $\omega$ -hydroxypoly[oxy(methyl-1,2-ethanediyl)], 3-hydroxy-2-(hydroxymethyl)-2-methylpropanoic acid, 1,1'-methylenebis[4-isocyanatobenzene] and  $\alpha$ -(oxiranylmethyl)- $\omega$ -(oxiranylmethoxy)poly[oxy(methyl-1,2-ethanediyl)] (9CI) (CA INDEX NAME)

CM 1

CRN 26142-30-3

CMF (C3 H6 O)<sub>n</sub> C6 H10 O3

CCI IDS, PMS

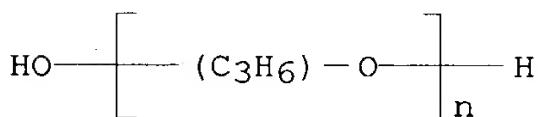


CM 2

CRN 25322-69-4

CMF (C3 H6 O)<sub>n</sub> H2 O

CCI IDS, PMS

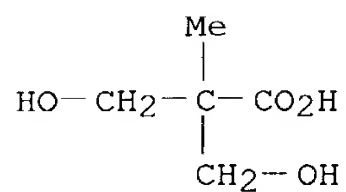


CM 3

CRN 4767-03-7

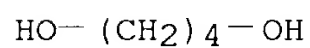
CMF C5 H10 O4





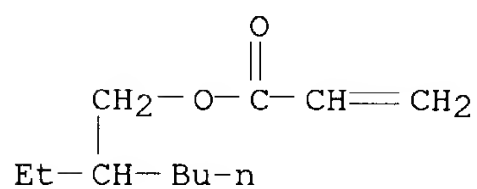
CM 4

CRN 110-63-4  
CMF C4 H10 O2



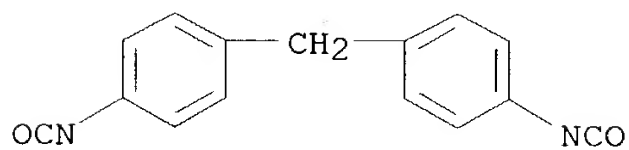
CM 5

CRN 103-11-7  
CMF C11 H20 O2



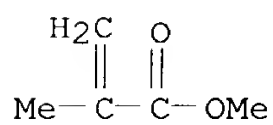
CM 6

CRN 101-68-8  
CMF C15 H10 N2 O2



CM 7

CRN 80-62-6  
CMF C5 H8 O2



RN 94061-03-7 HCAPLUS

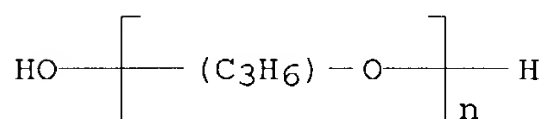
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with 1,4-butanediol, (chloromethyl)oxirane, 2-ethylhexyl 2-propenoate,  $\alpha$ -hydro- $\omega$ -hydroxypoly[oxy(methyl-1,2-ethanediyl)], 3-hydroxy-2-(hydroxymethyl)-2-methylpropanoic acid, 1,1'-methylenebis[4-isocyanatobenzene] and 4,4'-(1-methylethylidene)bis[phenol] (9CI) (CA INDEX NAME)

CM 1

CRN 25322-69-4

CMF (C3 H6 O)<sub>n</sub> H2 O

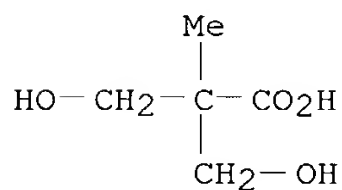
CCI IDS, PMS



CM 2

CRN 4767-03-7

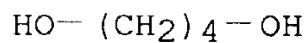
CMF C5 H10 O4



CM 3

CRN 110-63-4

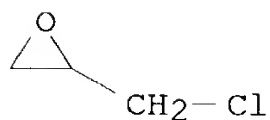
CMF C4 H10 O2



CM 4

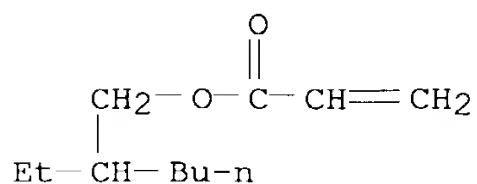
CRN 106-89-8

CMF C3 H5 Cl O



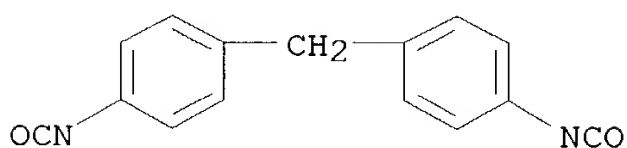
CM 5

CRN 103-11-7  
CMF C11 H20 O2



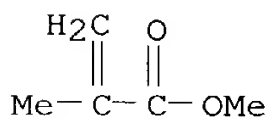
CM 6

CRN 101-68-8  
CMF C15 H10 N2 O2



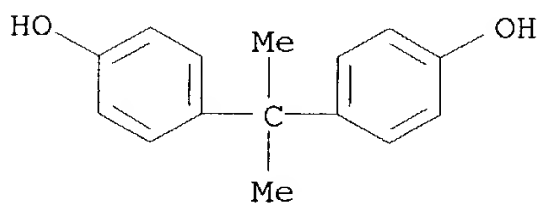
CM 7

CRN 80-62-6  
CMF C5 H8 O2



CM 8

CRN 80-05-7  
CMF C15 H16 O2



RN 94229-94-4 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with 1,4-butanediol, Denacol EX 820, 2-ethylhexyl 2-propenoate,  $\alpha$ -hydro- $\omega$ -hydroxypoly[oxy(methyl-1,2-ethanediyl)], 3-hydroxy-2-(hydroxymethyl)-2-methylpropanoic acid and 1,1'-methylenabis[4-isocyanatobenzene] (9CI) (CA INDEX NAME)

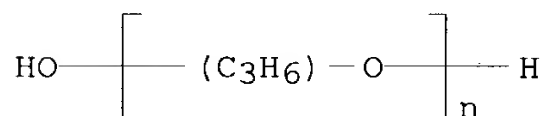
CM 1

CRN 70992-14-2  
CMF Unspecified  
CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

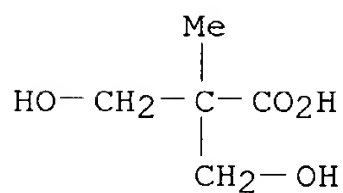
CM 2

CRN 25322-69-4  
CMF (C3 H6 O)<sub>n</sub> H2 O  
CCI IDS, PMS



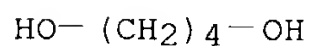
CM 3

CRN 4767-03-7  
CMF C5 H10 O4



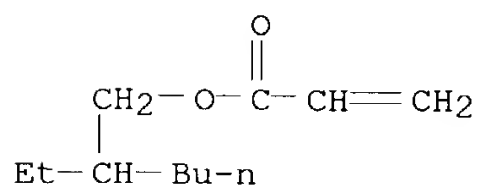
CM 4

CRN 110-63-4  
CMF C4 H10 O2



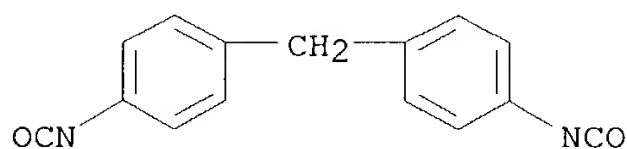
CM 5

CRN 103-11-7  
CMF C11 H20 O2



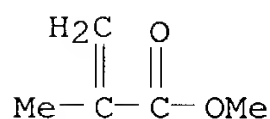
CM 6

CRN 101-68-8  
CMF C15 H10 N2 O2



CM 7

CRN 80-62-6  
CMF C5 H8 O2



RN 94352-39-3 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with  
bis(isocyanatomethyl)benzene, 1,4-butanediol, butyl 2-propenoate,  
ethenylbenzene, 3-hydroxy-2-(hydroxymethyl)-2-methylpropanoic acid,  
 $\alpha$ -(oxiranylmethyl)- $\omega$ -(oxiranylmethoxy)poly[oxy(methyl-1,2-  
ethanediyl)] and Placel 205 (9CI) (CA INDEX NAME)

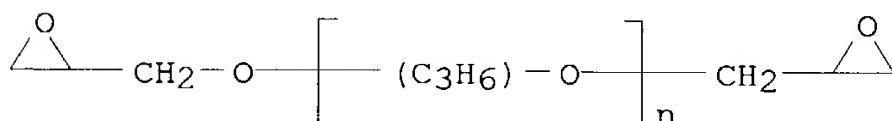
CM 1

CRN 94188-96-2  
CMF Unspecified  
CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

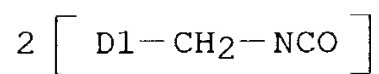
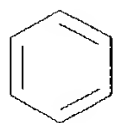
CM 2

CRN 26142-30-3  
CMF (C3 H6 O)<sub>n</sub> C6 H10 O3  
CCI IDS, PMS



CM 3

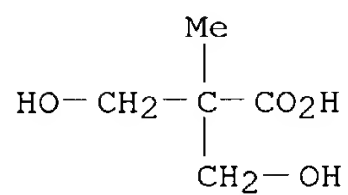
CRN 25854-16-4  
CMF C10 H8 N2 O2  
CCI IDS



CM 4

CRN 4767-03-7

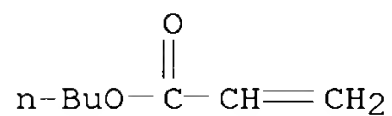
CMF C5 H10 O4



CM 5

CRN 141-32-2

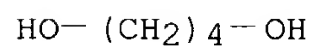
CMF C7 H12 O2



CM 6

CRN 110-63-4

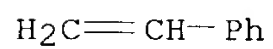
CMF C4 H10 O2



CM 7

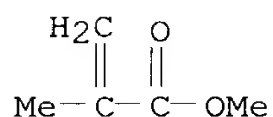
CRN 100-42-5

CMF C8 H8



CM 8

CRN 80-62-6  
CMF C5 H8 O2



RN 94361-46-3 HCAPLUS  
CN tert-Decanoic acid, ethenyl ester, polymer with 1,4-butanediol, 1,6-diisocyanatohexane, ethenyl acetate, 2-ethylhexyl 2-propenoate, 3-hydroxy-2-(hydroxymethyl)-2-methylpropanoic acid, 1,1'-methylenebis[4-isocyanatobenzene],  $\alpha, \alpha'$ -[(1-methylethylidene)di-4,1-phenylene]bis[ $\omega$ -hydroxypoly[oxy(methyl-1,2-ethanediyl)]]],  $\alpha$ -(oxiranylmethyl)- $\omega$ -(oxiranylmethoxy)poly[oxy(methyl-1,2-ethanediyl)], Placel 205 and 2-propenoic acid (9CI) (CA INDEX NAME)

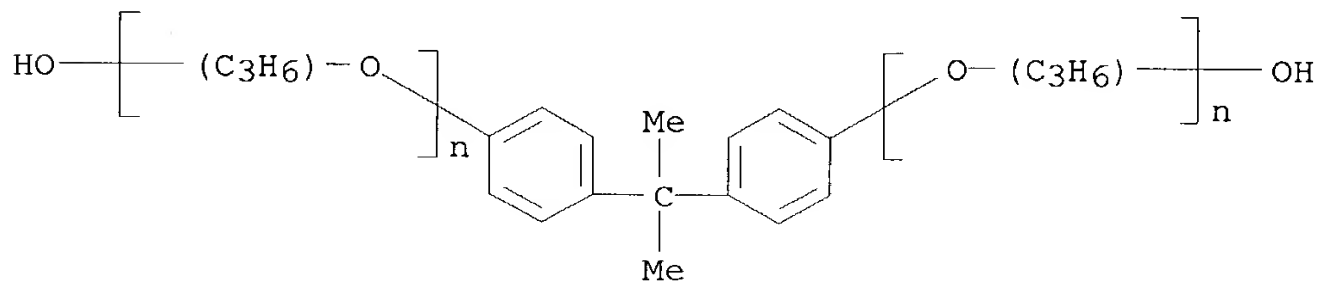
CM 1

CRN 94188-96-2  
CMF Unspecified  
CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

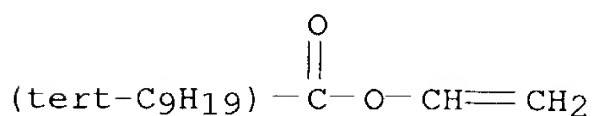
CM 2

CRN 37353-75-6  
CMF (C3 H6 O)<sub>n</sub> (C3 H6 O)<sub>n</sub> C15 H16 O2  
CCI IDS, PMS



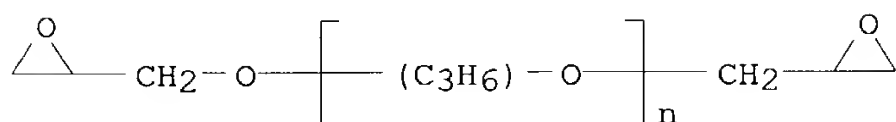
CM 3

CRN 26544-09-2  
CMF C12 H22 O2  
CCI IDS



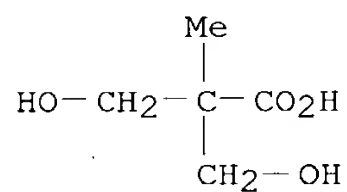
CM 4

CRN 26142-30-3  
CMF (C3 H6 O)<sub>n</sub> C6 H10 O3  
CCI IDS, PMS



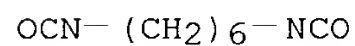
CM 5

CRN 4767-03-7  
CMF C5 H10 O4



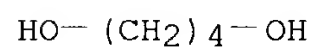
CM 6

CRN 822-06-0  
CMF C8 H12 N2 O2



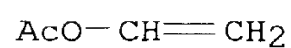
CM 7

CRN 110-63-4  
CMF C4 H10 O2



CM 8

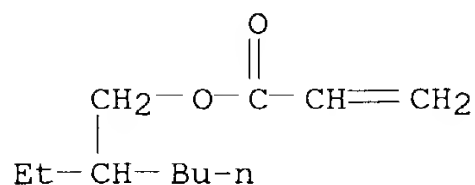
CRN 108-05-4  
CMF C4 H6 O2



CM 9

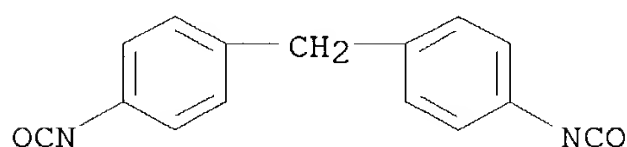


CRN 103-11-7  
CMF C11 H20 O2



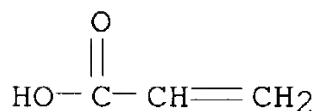
CM 10

CRN 101-68-8  
CMF C15 H10 N2 O2



CM 11

CRN 79-10-7  
CMF C3 H4 O2



L56 ANSWER 42 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN  
AN 1984:157970 HCAPLUS  
DN 100:157970  
TI Carboxyl-containing unsaturated urethane oligomers and polymers made from them  
AU Dronov, S. V.; Matyushov, V. F.; Khmelenko, G. I.  
CS USSR  
SO Plasticheskie Massy (1984), (2), 8-10  
CODEN: PLMSAI; ISSN: 0554-2901  
DT Journal  
LA Russian  
AB The title urethane oligomers soluble in **aqueous** alkalies and organic solvents of medium polarity (ketones, esters, chlorinated hydrocarbons, etc.) were prepared and photopolymerized, yielding products having good tensile strength (19-30 MPa), elongation at break (90-270%), and elasticity modulus on stretching (6.0-35.0 MPa), and especially suitable for the manufacture of printing plates. The urethane oligomers were synthesized by treating a macrodiisocyanate (adipic acid-diethylene glycol-TDI or polytetramethylene glycol-TDI copolymer) with hydroxyethyl methacrylate and an amine

(reaction product of ED-20 epoxy resin with monoethanolamine), and acylating the oligomer obtained with maleic, phthalic, or succinic anhydride. **Films** (70-100  $\mu$ ) cast from these acylated oligomers were photopolymd. in the presence of Trigonal-14 [51312-47-1] initiator.

CC 39-4 (Synthetic Elastomers and Natural Rubber)  
Section cross-reference(s): 38, 74

ST urethane oligomer acrylate; vulcanization photochem urethane oligomer; printing plate urethane rubber; soly urethane oligomer

IT Rubber, urethane, preparation  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(carboxy group-containing, unsatd., preparation and photochem. vulcanization and physicomech. properties of)

IT Printing plates  
(urethane rubbers for, preparation and photochem. vulcanization of)

IT Urethane polymers, preparation  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(carboxy-containing, unsatd., preparation and photochem. **crosslinking** and physicomech. properties of)

IT **Crosslinking**  
Vulcanization  
(photochem., of carboxy group-containing unsatd. urethane oligomers)

IT 51312-47-1  
RL: CAT (Catalyst use); USES (Uses)  
(catalysts, for photochem. **crosslinking** of carboxy-containing unsatd. urethane oligomers)

IT **89698-96-4P**  
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(preparation and physicomech. properties of)

IT **89698-91-9P 89698-93-1P 89698-94-2P 89698-95-3P**  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(rubber, preparation and physicomech. properties of)

IT **89698-96-4P**  
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(preparation and physicomech. properties of)

RN 89698-96-4 HCAPLUS

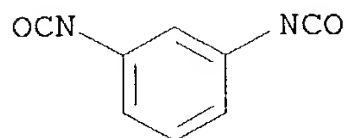
CN Hexanedioic acid, polymer with 2-aminoethanol, (chloromethyl)oxirane, 1,3-diisocyanatomethylbenzene, 2-hydroxyethyl 2-methyl-2-propenoate, 1,3-isobenzofurandione, 4,4'-(1-methylethylidene)bis[phenol] and 2,2'-oxybis[ethanol] (9CI) (CA INDEX NAME)

CM 1

CRN 26471-62-5

CMF C9 H6 N2 O2

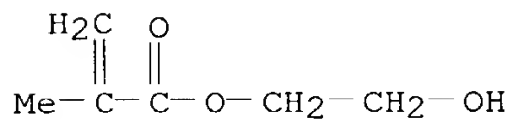
CCI IDS



D1-Me

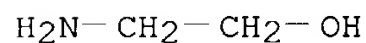
CM 2

CRN 868-77-9  
CMF C6 H10 O3



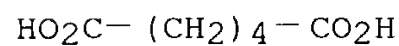
CM 3

CRN 141-43-5  
CMF C2 H7 N O



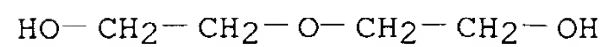
CM 4

CRN 124-04-9  
CMF C6 H10 O4



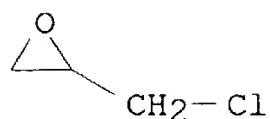
CM 5

CRN 111-46-6  
CMF C4 H10 O3



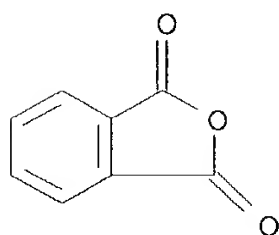
CM 6

CRN 106-89-8  
CMF C3 H5 Cl O



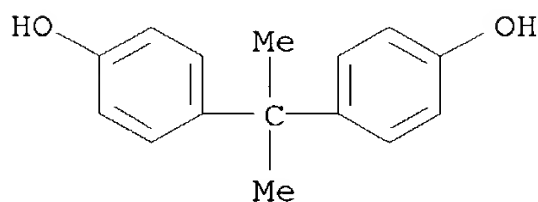
CM 7

CRN 85-44-9  
CMF C8 H4 O3



CM 8

CRN 80-05-7  
CMF C15 H16 O2



IT **89698-91-9P 89698-93-1P 89698-94-2P  
89698-95-3P**

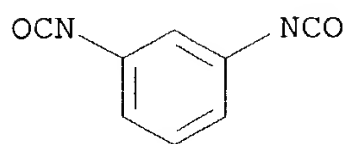
RL: SPN (Synthetic preparation); PREP (Preparation)  
(rubber, preparation and physicomech. properties of)

RN 89698-91-9 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with  
2-aminoethanol, (chloromethyl)oxirane, 1,3-diisocyanatomethylbenzene,  
 $\alpha$ -hydro- $\omega$ -hydroxypoly(oxy-1,4-butanediyl),  
1,3-isobenzofurandione and 4,4'-(1-methylethylidene)bis[phenol] (9CI) (CA  
INDEX NAME)

CM 1

CRN 26471-62-5  
CMF C9 H6 N2 O2  
CCI IDS



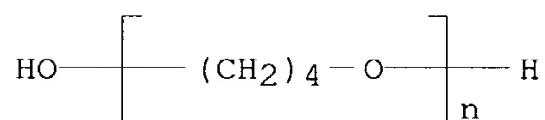
D1-Me

CM 2

CRN 25190-06-1

CMF (C4 H8 O)<sub>n</sub> H2 O

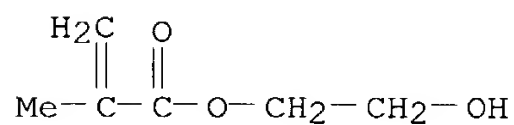
CCI PMS



CM 3

CRN 868-77-9

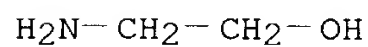
CMF C6 H10 O3



CM 4

CRN 141-43-5

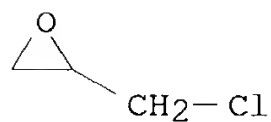
CMF C2 H7 N O



CM 5

CRN 106-89-8

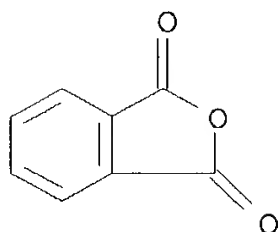
CMF C3 H5 Cl O



CM 6

CRN 85-44-9

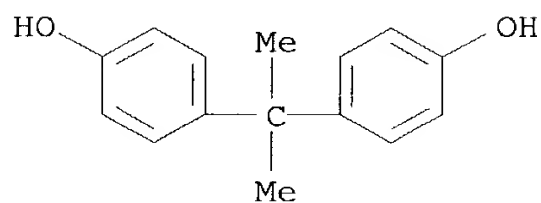
CMF C8 H4 O3



CM 7

CRN 80-05-7

CMF C15 H16 O2



RN 89698-93-1 HCAPLUS

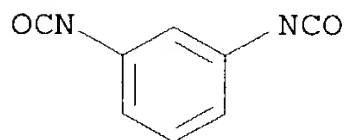
CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with 2-aminoethanol, (chloromethyl)oxirane, 1,3-diisocyanatomethylbenzene, 2,5-furandione,  $\alpha$ -hydro- $\omega$ -hydroxypoly(oxy-1,2-ethanediyl) and 4,4'-(1-methylethylidene)bis[phenol] (9CI) (CA INDEX NAME)

CM 1

CRN 26471-62-5

CMF C9 H6 N2 O2

CCI IDS



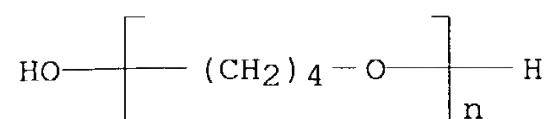
Dl-Me

CM 2

CRN 25190-06-1

CMF (C4 H8 O)<sub>n</sub> H2 O

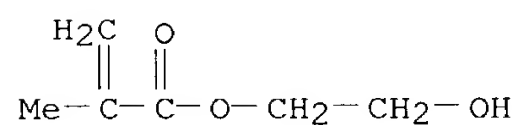
CCI PMS



CM 3

CRN 868-77-9

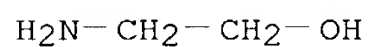
CMF C6 H10 O3



CM 4

CRN 141-43-5

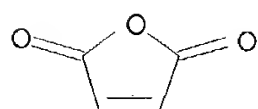
CMF C2 H7 N O



CM 5

CRN 108-31-6

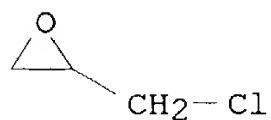
CMF C4 H2 O3



CM 6

CRN 106-89-8

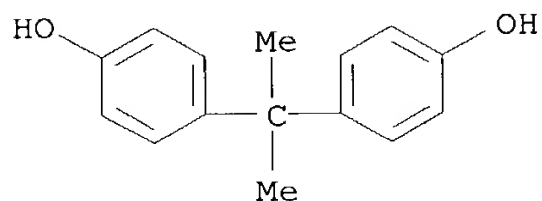
CMF C3 H5 Cl O



CM 7

CRN 80-05-7

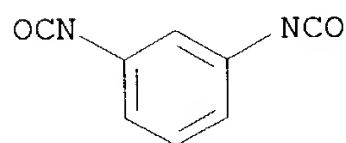
CMF C15 H16 O2



RN 89698-94-2 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with  
 2-aminoethanol, (chloromethyl)oxirane, dihydro-2,5-furandione,  
 1,3-diisocyanatomethylbenzene,  $\alpha$ -hydro- $\omega$ -hydroxypoly(oxy-1,4-  
 butanediyl) and 4,4'-(1-methylethylidene)bis[phenol] (9CI) (CA INDEX  
 NAME)

CM 1

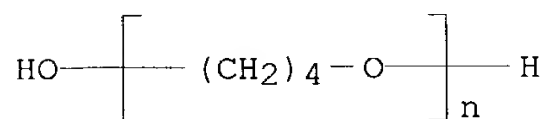
CRN 26471-62-5  
 CMF C9 H6 N2 O2  
 CCI IDS



D1-Me

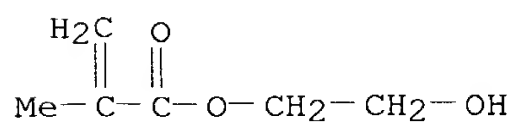
CM 2

CRN 25190-06-1  
 CMF (C4 H8 O)<sub>n</sub> H2 O  
 CCI PMS



CM 3

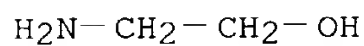
CRN 868-77-9  
 CMF C6 H10 O3





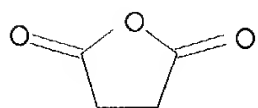
CM 4

CRN 141-43-5  
CMF C2 H7 N O



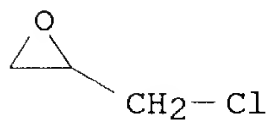
CM 5

CRN 108-30-5  
CMF C4 H4 O3



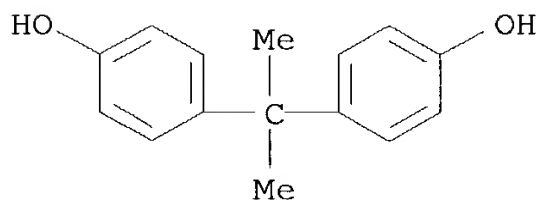
CM 6

CRN 106-89-8  
CMF C3 H5 Cl O



CM 7

CRN 80-05-7  
CMF C15 H16 O2

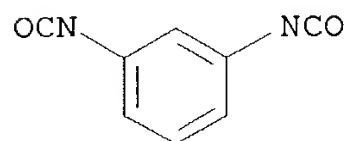


RN 89698-95-3 HCAPLUS  
CN Hexanedioic acid, polymer with 2-aminoethanol, (chloromethyl)oxirane, dihydro-2,5-furandione, 1,3-diisocyanatomethylbenzene, 2-hydroxyethyl 2-methyl-2-propenoate, 4,4'-(1-methylethylidene)bis[phenol] and 2,2'-oxybis[ethanol] (9CI) (CA INDEX NAME)

CM 1

CRN 26471-62-5  
CMF C9 H6 N2 O2

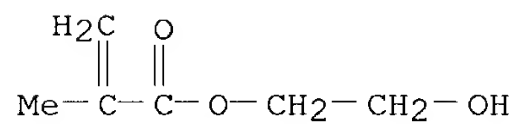
CCI IDS



D1-Me

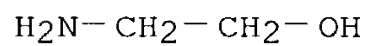
CM 2

CRN 868-77-9  
CMF C6 H10 O3



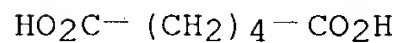
CM 3

CRN 141-43-5  
CMF C2 H7 N O



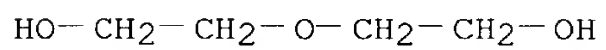
CM 4

CRN 124-04-9  
CMF C6 H10 O4



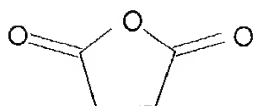
CM 5

CRN 111-46-6  
CMF C4 H10 O3



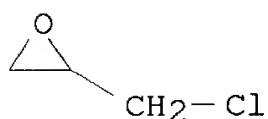
CM 6

CRN 108-30-5  
CMF C4 H4 O3



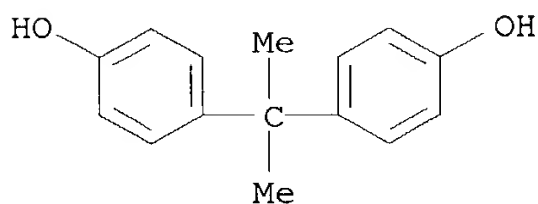
CM 7

CRN 106-89-8  
CMF C3 H5 Cl O



CM 8

CRN 80-05-7  
CMF C15 H16 O2



L56 ANSWER 43 OF 43 HCAPLUS COPYRIGHT 2004 ACS on STN  
AN 1980:516088 HCAPLUS  
DN 93:116088  
TI Radiation-hardenable **aqueous** binder dispersions  
IN Buethe, Ingolf; Loch, Werner  
PA BASF A.-G., Fed. Rep. Ger.  
SO Ger. Offen., 21 pp.  
CODEN: GWXXBX  
DT Patent  
LA German  
FAN.CNT 1

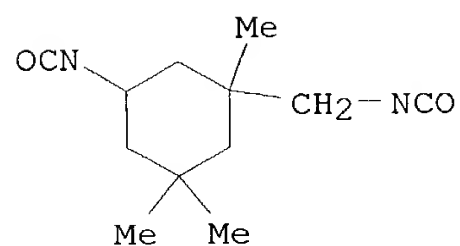
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2853921	A1	19800703	DE 1978-2853921	19781214
	US 4287039	A	19810901	US 1979-97747	19791126
	EP 12339	A1	19800625	EP 1979-104923	19791205
	EP 12339	B1	19830309		
	R: BE, CH, DE, FR, GB, IT, NL, SE				
PRAI	DE 1978-2853921		19781214		
AB	A urethane <b>acrylate</b> , and <b>acrylate</b> group-containing <b>polyester</b> , or a reaction product of <b>acrylic</b> acid and				

bisphenol A diglycidyl ether is used a radiation-hardenable binder in **aqueous** compns. which are especially useful as **coating** materials and binding materials for fleeces. The compns. give thick **coatings** with high gloss and good mech. properties. Thus, 320 parts adipic acid-neopentyl glycol copolymer (OH value 210) was treated with 200 parts isophorone diisocyanate and 69.5 parts 2-hydroxyethyl **acrylate** to prepare a urethane **acrylate** which was dissolved MeCOEt containing photoinitiators, mixed with **water** containing an emulsifier, distilled to remove MeCOEt, mixed with MeN(CH<sub>2</sub>CH<sub>2</sub>OH)<sub>2</sub>, and coated on glass to prepare a 100 $\mu$  thick **coating** which was hardened with UV light.

- IC C08J003-06; C08J003-28; C08L067-06; C08L071-02
- CC 42-7 (**Coatings**, Inks, and Related Products)
- ST **acrylate** deriv **aq** radiation hardening;  
**urethane acrylate aq** radiation hardening;  
**polyester acrylate aq** radiation hardening;  
**epoxy acrylate aq** radiation hardening; textile  
binder **acrylate** radiation hardening; **crosslinking**  
radiation **acrylate** deriv **aq**
- IT **Coating** materials  
(**acrylate** derivs., radiation-hardenable, **aqueous**  
dispersions of)
- IT Binding materials  
(**acrylate** derivs., radiation-hardenable, **aqueous**  
dispersions of, for nonwoven textiles)
- IT **Polyesters**, uses and miscellaneous  
RL: USES (Uses)  
(**acrylate**-terminated, **coatings** and binders,  
radiation-hardenable, **aqueous** dispersions of)
- IT **Epoxy** resins, uses and miscellaneous  
RL: USES (Uses)  
(**acrylate**-terminated, binders, radiation-hardenable,  
**aqueous** dispersions of)
- IT Urethane polymers, uses and miscellaneous  
RL: USES (Uses)  
(**acrylate**-terminated, **coatings** and binders,  
radiation-hardenable, **aqueous** dispersions of)
- IT Textiles  
(nonwoven, binders for, **aqueous** dispersions of  
radiation-hardenable **acrylate** derivs. as)
- IT **Crosslinking**  
(radiochem., of **aqueous** dispersions of **acrylate**  
derivs., in binders and **coatings**)
- IT 79-10-7D, reaction products with bisphenol A diglycidyl ether  
1675-54-3D, reaction products with **acrylic** acid  
**70766-56-2** 74834-36-9  
RL: USES (Uses)  
(radiation-hardenable, **aqueous** dispersions of, as  
**coatings** and textile binders)
- IT **70766-56-2**  
RL: USES (Uses)  
(radiation-hardenable, **aqueous** dispersions of, as  
**coatings** and textile binders)
- RN 70766-56-2 HCAPLUS
- CN Hexanedioic acid, polymer with 2,2-dimethyl-1,3-propanediol,  
2-hydroxyethyl 2-propenoate and 5-isocyanato-1-(isocyanatomethyl)-1,3,3-  
trimethylcyclohexane (9CI) (CA INDEX NAME)

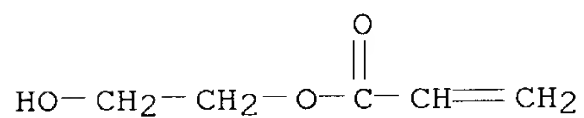
CM 1

CRN 4098-71-9  
CMF C12 H18 N2 O2



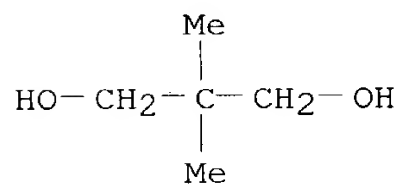
CM 2

CRN 818-61-1  
CMF C5 H8 O3



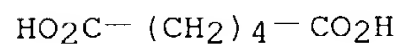
CM 3

CRN 126-30-7  
CMF C5 H12 O2



CM 4

CRN 124-04-9  
CMF C6 H10 O4



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L4	25199	SEA	FILE=REGISTRY	ABB=ON	80-05-7/CRN
L6	177218	SEA	FILE=REGISTRY	ABB=ON	1.30.1/RID
L7	16369	SEA	FILE=REGISTRY	ABB=ON	L4 AND L6
L10	1440	SEA	FILE=REGISTRY	ABB=ON	60-33-3/CRN
L12	363	SEA	FILE=REGISTRY	ABB=ON	463-40-1/CRN

KATHLEEN FULLER EIC 1700 REMSEN 4B28 571/272-2505

L14 2638 SEA FILE=REGISTRY ABB=ON 112-80-1/CRN  
 L15 120 SEA FILE=REGISTRY ABB=ON L7 AND (L10 OR L12 OR L14)  
 L58 19 SEA FILE=REGISTRY ABB=ON L15 AND PROPEN?  
 L63 4 SEA FILE=REGISTRY ABB=ON L58 AND AMINE  
 L64 2 SEA FILE=HCAPLUS ABB=ON L63  
 L66 1 SEA FILE=HCAPLUS ABB=ON L64 AND (?URETHAN? OR ?CYANAT?)

=> d 166 all hitstr

L66 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1988:151561 HCAPLUS  
 DN 108:151561  
 ED Entered STN: 30 Apr 1988  
 TI Epoxy resin composition  
 IN Doi, Takao; Yamada, Yutaka; Kozawa, Shigeyuki  
 PA Asahi Glass Co., Ltd., Japan  
 SO Eur. Pat. Appl., 9 pp.  
 CODEN: EPXXDW  
 DT Patent  
 LA English  
 IC ICM C08F283-10  
 ICS C08L063-00  
 CC 37-6 (Plastics Manufacture and Processing)  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 247568	A2	19871202	EP 1987-107608	19870525
	EP 247568	A3	19891206		
	EP 247568	B1	19940105		
	R: DE, IT				
	JP 62277416	A2	19871202	JP 1986-120060	19860527
	JP 07002888	B4	19950118		
	US 4868252	A	19890919	US 1987-54506	19870527
PRAI	JP 1986-120060		19860527		

AB The title composition, with improved water and moisture resistance, comprises an epoxy resin and a polyfluoroalkyl group-containing polymer particulate dispersed therein. Thus, a mixture of 80 g Epikote 1001 and 2 g **isocyanatoethyl** methacrylate was heated for 5 h at 80°; adding dropwise a solution containing 1 g AIBN and 29 g

CH2:CMeco2C2H4NEtSO2C8F17

(I) in 50 g Me iso-Bu ketone into the mixture at 100° during 1 h, and heating at 100° gave a viscous liquid; removing solvent in vacuo, mixing 50 g of the residue with 20 g Ph glycidyl ether, 7.5 g methylhexahydrophthalic anhydride, and 0.1 g benzyldimethylamine, and curing for 5 h at 150° gave a cast plate exhibiting water absorption 1.14% after boiling for 50 h in water vs. 1.81 for a composition without I-AIBN solution

ST acrylate fluoroalkyl copolymer epoxy waterproof; methylhexahydrophthalic anhydride epoxy resin waterproof; phenylglycidyl ether epoxy copolymer waterproof; fluoropolymer epoxy water resistance

IT Epoxy resins, uses and miscellaneous

RL: USES (Uses)

(comps., containing polyfluoroalkyl-containing polymer, water-resistant)

IT Water-resistant materials

(epoxy resins containing dispersed polyfluoroalkyl-containing acrylate polymer)

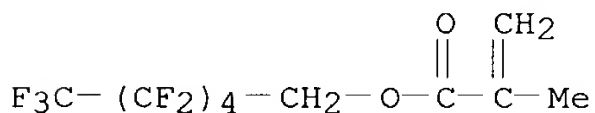
IT Fluoropolymers

*Structure  
close to  
claim 33*

RL: USES (Uses)  
 (epoxy resins containing, water-resistant)  
 IT 107445-41-0  
 RL: USES (Uses)  
 (compns., containing polyfluoroalkyl methacrylate polymer, water- and  
 moisture-resistant)  
 IT **113735-84-5 113812-85-4** 113814-71-4  
 RL: USES (Uses)  
 (compns., water- and moisture-resistant)  
 IT 31763-59-4  
 RL: USES (Uses)  
 (epoxy resins containing, water-resistant)  
 IT **113735-84-5 113812-85-4**  
 RL: USES (Uses)  
 (compns., water- and moisture-resistant)  
 RN 113735-84-5 HCAPLUS  
 CN 9,12-Octadecadienoic acid (9Z,12Z)-, dimer, polymer with  
 (chloromethyl)oxirane polymer with 4,4'-(1-methylethylidene)bis[phenol]  
 2-propenoate, 1,2-ethanediamine and 2,2,3,3,4,4,5,5,6,6,6-  
 undecafluorohexyl 2-methyl-2-propenoate, graft (9CI) (CA INDEX NAME)

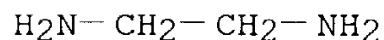
CM 1

CRN 13173-36-9  
 CMF C10 H7 F11 O2



CM 2

CRN 107-15-3  
 CMF C2 H8 N2

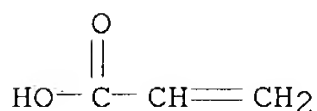


CM 3

CRN 55818-57-0  
 CMF (C15 H16 O2 . C3 H5 Cl O)x . x C3 H4 O2

CM 4

CRN 79-10-7  
 CMF C3 H4 O2



CM 5

CRN 25068-38-6

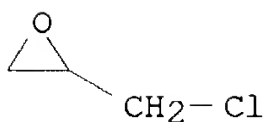
CMF (C15 H16 O2 . C3 H5 Cl O) x

CCI PMS

CM 6

CRN 106-89-8

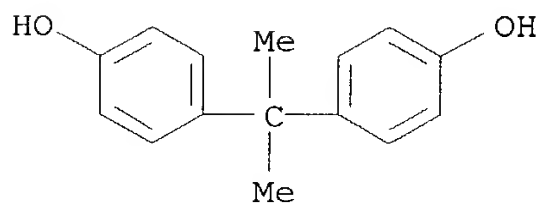
CMF C3 H5 Cl O



CM 7

CRN 80-05-7

CMF C15 H16 O2



CM 8

CRN 6144-28-1

CMF (C18 H32 O2) 2

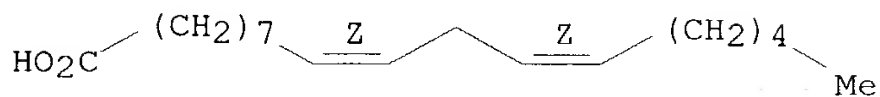
CCI PMS

CM 9

CRN 60-33-3

CMF C18 H32 O2

Double bond geometry as shown.



RN 113812-85-4 HCAPLUS

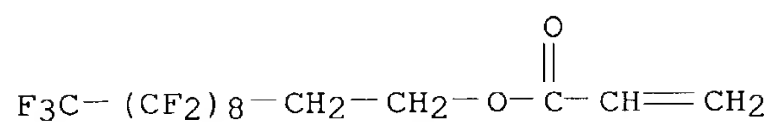
CN 9,12-Octadecadienoic acid (9Z,12Z)-, dimer, polymer with (chloromethyl)oxirane polymer with 4,4'-(1-methylethylidene)bis[phenol] 2-propenoate, 1,2-ethanediamine and 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,11-nonadecafluoroundecyl 2-propenoate, graft (9CI) (CA INDEX NAME)



CM 1

CRN 41328-01-2

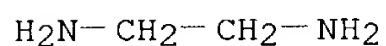
CMF C14 H7 F19 O2



CM 2

CRN 107-15-3

CMF C2 H8 N2



CM 3

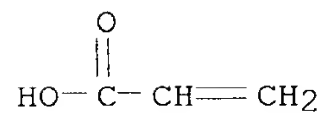
CRN 55818-57-0

CMF (C15 H16 O2 . C3 H5 Cl O)x . x C3 H4 O2

CM 4

CRN 79-10-7

CMF C3 H4 O2



CM 5

CRN 25068-38-6

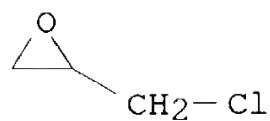
CMF (C15 H16 O2 . C3 H5 Cl O)x

CCI PMS

CM 6

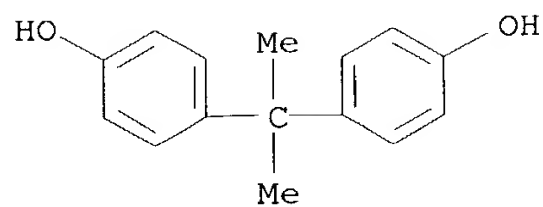
CRN 106-89-8

CMF C3 H5 Cl O



CM 7

CRN 80-05-7  
CMF C15 H16 O2



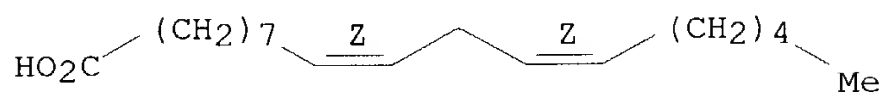
CM 8

CRN 6144-28-1  
CMF (C18 H32 O2)2  
CCI PMS

CM 9

CRN 60-33-3  
CMF C18 H32 O2

Double bond geometry as shown.



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